

# SUMERS' RESEARCH *Bulletin*

INCOMPLETE FILE



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# CONSUMERS' RESEARCH



Vol. 17 • No. 5

## BULLETIN

May 1946

### Off the Editor's Chest

**L**AST year at this time it was considered somewhat unpatriotic to take a vacation; open discussion of the subject was discouraged at least. This year apparently everyone who can get away is planning to "take a trip." By the middle of March, leading hotels in Atlantic City were reported sold out for the July-August period. The best known New England resorts were taking reservations only for persons who had been guests in previous years. One organization in California which in normal times advertised the charms of the northern and central sections of its state was tactfully suggesting that next year, 1947, would be a better time to come to California, since all resorts were practically sold out.

After the strains and tensions of the past few years there is no doubt that many people literally require a change and recreation for the sake of health and peace of mind. England found that even under the exigencies of daily bombings, her workers were not capable of maximum output without time for relaxation and rehabilitation; hence officials put special emphasis on outdoor living, camping, hiking, hunting, and fishing. Certainly in this first peacetime summer, no one need apologize for seeking to rebuild nerves worn to a thin razor's edge listening to news of battle and troop movements and of the advances and retreats and bickerings of diplomats engaged in "wars of nerves," or the tensions that were built up from the monotony of staying home in fine weekend weather during the days of gasoline rationing.

With everybody possessed of the same impulse

to go somewhere, it will be the wise traveler who makes his plans and reservations as far in advance as possible. As winter travelers going to the south discovered, it is no longer possible to put the bags in the luggage compartment and just start out. Gasoline stations and eating places were not so plentiful as in pre-war days. Hotel and tourist camp accommodations were sold out by nightfall and the traveler who wanted to be sure of accommodations had to find a place to sleep by four in the afternoon or keep on driving. Even in the western national parks, it has been reported to be necessary to stand in line early in the day to ensure having accommodations at night in the less expensive cabins.

All of which is not by way of saying that you had better stay home, but rather to point up the need for a good deal more than the ordinary amount of planning if you are to make a trip free from numerous vexations and needless discomforts and delays. It is no longer possible to achieve satisfactory results from starting out with a happy-go-lucky, let's-stay-whenever-we-happen-to-be approach. That restaurant where you used to get such good food may be closed because its owner went to war and has not yet gotten back into the old groove, or the hotel you liked so much may still be an army or navy rehabilitation center.

First of all decide the general direction in which you wish to head and get yourself a good road map. Some of the best are put out (free of charge) by Socony Vacuum Oil Company (Rockefeller Center,

*(Continued on page 26)*

**Scientific and Technical Experts and Editors:** F. J. Schlink, R. Joyce, M. C. Phillips, A. R. Greenleaf, and Charles L. Bernier. **Editorial Assistant:** Mary F. Roberts.

Symbols used to indicate sources of data and bases of ratings: A—recommended on basis of quality; AA—regarded as worthy of highest recommendation; B—intermediate with respect to quality; C—not recommended on basis of quality; cr—information from Consumers' Research's own tests or investigations. 1, 2, 3—relative prices, 1 being low, 3 high. Note that price and quality are completely differentiated in CR's listings; a quality judgment is independent of price; 45, 46—year in which test was made or information obtained or organized by the staff of Consumers' Research.

It will be advantageous if you will, whenever possible, send prompt notice of change of address at least a month before it is to take effect, accompanying your notice with statement of your old address with name in full. At least three weeks' notice must be given in any case. This rule, however, regarding long advance notice does not apply to military personnel.

CR will, of course, gladly change addresses for men and women in the services as often as required by changes in station and other circumstances.

★ ★ ★ For a brief cumulative index of 1946 BULLETINS preceding this issue, see page 26.

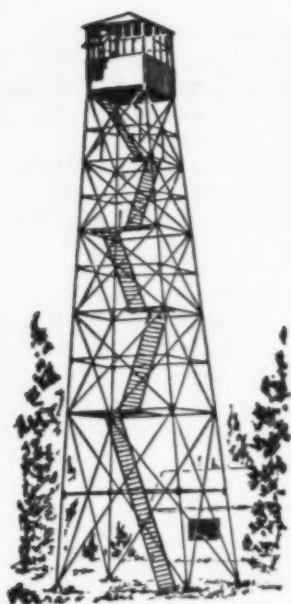
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## *The Consumers' Observation Post*

THE AMOUNT OF WHEAT SAVED for relief shipments abroad by current government action in making gray bread (made from flour of 80% instead of 72% extraction) mandatory, and cutting down on the production of liquor is not expected by food officials to be very large. The net effect that is aimed for is admittedly a psychological one to dramatize the need for foreign relief and to spur heavier marketing of livestock. "Psychological diplomacy," is what one report calls it, pointing out that officials feel that the United States must make some gesture toward tightening its belt.

Experts on nutrition warn that certain characteristics of the new flour may cause us to lose the benefits of flour enrichment. The millers are dropping their regular brands and marketing the darker flour under special brand names because they fear the unfavorable reaction of housewives to the product and do not wish to jeopardize the good will value of their top line brand names by associating them with the emergency product.

\* \* \*

NEW TIRES for passenger automobiles are not expected to be plentiful this year. In fact, the president of B. F. Goodrich Co., tire manufacturers, has warned motorists to have present tires recapped before they get beyond the good-for-recapping stage. He estimated that it would be late 1946 or early 1947 before "a car owner can be sure of getting just the new tire he wants, when he wants it."

\* \* \*

SILK FABRICS are again making their appearance in limited quantities. Since silk has been merely a name for several years, consumers will need to be reminded that there is considerable difference in the wearing quality of "pure dye silk," which is defined legally as silk that has no more than 10 percent (15 percent for black goods) of added dyeing or finishing material, and "weighted silks" which have had heavy compounds of tin, iron, or lead added to give them more weight and body. These weighted silks deteriorate rapidly under the influence of light, the heat of an iron, contact with perspiration, liquid deodorants, and salt in the atmosphere near the seashore, and are greatly weakened with time, even when not worn. Rayon Textile Monthly warned recently that department stores were deceptively playing on the phrase "pure dye" in advertising certain silks and were failing to make reference to the fact that the silk fibers had been subjected to weighting. Before buying, look for the term "pure dye silk" on the label. The label of real unweighted silk will not fail to indicate the quality of the material in this manner.

\* \* \*

THE NEW COLD-WAVE PERMANENTS are still in an experimental stage of development and their success depends in large measure on the skill of the operator. There should always be a test wave given first. One very sad experience of a woman who had a cold-wave permanent given by an operator using the process for the first time was reported in the Journal of the American Medical Association not long ago. It appeared that the beauty parlor operator used the wrong solution and for five or six weeks afterwards the victim's hair came out in bunches, so that the top of her head was completely bald. The bald spots persisted for about a year, but fortunately the hair finally grew out again.

\* \* \*

LOTS OF ORANGES, LEMONS, AND GRAPEFRUIT is the crop estimate for this year. In fact, the supply of these three citrus fruits is expected to be a record-breaker. Apples will continue to be scarce.

JUST HOW LARGE IS THE MARK-UP on some items of surplus goods sold by manufacturers and government agencies to department stores and other dealers, and thereafter sold to the public? Many consumers have wondered about the size of this figure. One example of tremendous mark-up appeared in a news item in Radio & Television Retailing, which reported that field battery telephones originating in the First World War were sold to a secondhand dealer at \$1 each. The dealer then disposed of them to a prominent department store chain at \$3 each and, after slight modification, the chain sold the telephones to the consumer at \$29.50 each.

\* \* \*

CORN contains some factor that increases the body's need for the vitamin niacin, according to recent studies made at the University of Wisconsin. The rate of disease and death from pellagra has always been high among people who ate large amounts of corn. The Wisconsin studies show a direct relationship between the South's fondness for corn meal and grits and its higher pellagra rate. At least five states now require that all degerminated corn meal and grits be enriched with added vitamins and minerals. The amount of niacin that is added by this process is considered sufficient to supply the additional amount needed by the body to utilize the corn properly.

\* \* \*

THE CEILING PRICES on 1945 and 1946 model used automobiles are to be the same as the prices on new cars, according to an OPA ruling. The ceiling prices for 1941 and 1942 used cars, however, are higher than the ceilings for new 1946 models. A used 1942 Chevrolet sedan may sell, under OPA regulations, for \$250 more than a 1946 Chevrolet, including all taxes and charges. It's no wonder that returning veterans are unable to pick up a secondhand car at a reasonable price. In answer to a letter inquiring if this surprising price relationship correctly reflected the state of the automobile market, an OPA Commodity Price Specialist replied by calling attention to OPA Regulation MPR 540, Section 5, Paragraph (b) (1) which required base prices as set forth in the regulation to be reduced 4 percent as of January 1, 1946. The explanation continued "We are aware of certain criticisms of prices as they now appear in the subject regulation, but these prices were a victory at the time they were imposed and the prices charged for used 42's for example, are higher than the prices charged for the new 46's because of the high handling and preparation charge and 1 percent per month for warehousing, etc." This may make sense to those skilled in semantics or the higher governmental price-control economics, but the ordinary consumer will have difficulty understanding just how a car that may have put in 4 years of hard service and, in some cases, many thousands of miles of travel is worth more of anybody's money than a brand new car off the assembly line.

\* \* \*

BUTTER is seen so seldom in the food stores these days that many women are churning their own, and, just as they did in less modern times, women are swapping recipes and methods. One homemaker finds that she gets somewhat more than a quarter of a pound of butter from the cream skimmed from six quarts of Jersey milk. She takes the cream directly from the refrigerator and beats it with a rotary egg-beater until it is lumpy and until further beating ceases to produce any change in consistency. Then she transfers the cream to a jar and adds about a quarter of a cup of milk and shakes it until the separation of the butter is complete. Then she drains the butter and works in about half a teaspoonful of salt with a spoon. Since the estimated cost of butter by the home-churned method is around \$1.20 a pound and the controlled retail price of butter is around 56¢ a pound, it is easy to see why the farmer prefers to sell his butter fat as cream rather than butter.

\* \* \*

INSTINCTIVE APPETITE deserves far more consideration than nutritionists give it, suggests Bert D. Ingels, consulting chemist, in Food Industries. He points out that animals have well-developed instinctive appetites to which their owners pay careful attention and he raises the interesting question whether human instinct may not be more informative than science in determining what is good for people to eat. In spite of the millions of dollars spent on trying to get people of the world to eat soy bean products, for example, they are not popular; yet according to analyses by food experts, they contain an unusual combination of desirable and important nutritive elements. Perhaps the reason why will come to light in time just as the case for whole wheat bread

(The continuation of this section is on page 29)

# Shall We Build Now or Wait?

By DEANE G. CARTER

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DEPARTMENT OF AGRICULTURAL ENGINEERING,  
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★ ★ ★

THE post-war home building prospect is by no means as bright as the picture presented to the public only a year ago. Instead of the thousands of new houses that were to be started "within six months after the war" there has been virtually *no* construction of new homes. Increasing and uncertain costs, labor shortage, scarce materials, and delays have created obstacles that will take many months, perhaps years, to overcome.

The few houses now under construction are lower in quality in many respects and have far less value in relation to cost than houses built before the war. Many are small; much of the lumber is green, or off grade; and alternate or substitute materials are used in place of materials usually preferred.

There is an unfilled demand for new homes, estimated to run from one to three million. The Producer's Council estimates that at least twelve million new houses will be needed within ten years. Yet we have never built as many as a million houses in one year, and in

1946 probably fewer than half a million will be built.

As long as the acute shortage exists, the "seller's market" will tend to increase the price of houses already built, and reduce the quality of new construction. The bulk of available supplies will likely go to builders and dealers with the greatest business resourcefulness and buying power, thus tending to concentrate new construction in subdivisions and communities controlled by large-volume builders and developers.

Regulations were recently announced channeling about two-thirds of the lumber and certain other materials into residential construction and limiting some types of construction or banning them altogether. This is not a solution because the total available supply is far from sufficient to meet the urgent demand. Although efforts are made to divert materials to houses costing less than \$10,000, there is no assurance that many such houses will be built. Veterans are given first preference to purchase or rent new houses,

but if not taken by veterans, anyone has the right to buy. Many veterans are of course not permanently located or sufficiently well established to pay the price or to risk the investment in a house.

The lumber trade and the building industry contend that federal regulations, especially price control, are holding back production and building. For example, mill prices on some common lumber items needed for houses are below the cost of production, according to the producers. Some recent adjustments in the regulations have been made to stimulate production of the lumber most needed for houses. Builders and investors hesitate to build houses for rent, for they have no control over some of the cost factors, whereas the rentals they are permitted to charge are under close governmental regulations.

The cost of building is definitely higher than before the war. In central Illinois estimates are at least 35 to 40 percent above the 1941 level. Generally higher wage levels are certain to be reflected in



higher costs for housing for at least a few years. More important than today's cost in comparison with pre-war cost is the uncertainty in the present situation. Building a new house requires an organized plan of operation. An architect must be employed or a house plan must be selected and adapted to the site. A reasonably close estimate of cost is needed to permit the prospective owner to decide on his ability to make the down payment and arrange for financing. Workmen must be found and subcontractors secured. Under present conditions delivery must be assured on all of the needed materials and equipment to avoid long delays.

The materials situation is illustrated by the comments of several dealers interviewed recently. One small town dealer received only  $1\frac{1}{2}$  carloads of good lumber in the past 12 months. He is unable to secure promise of delivery on an additional amount of over 25 carloads he needs. Another dealer reports delivery of a carload occasionally, but the kind and quality are such as may not be suitable for houses. The construction of a house requires a wide variety of supplies such as flooring, siding, framing, roofing, and millwork. Usually these come from different mills and from different parts of the country. Thus a dealer must have several carloads of stock on hand before he can proceed to the building of a single house.

If you are a war veteran, you have a better chance than a civilian to get new housing. The best opportunity will be through purchase in a subdivision handled by a building organization, or from a con-

tractor who is building houses for sale in a town or community. If a veteran does not take the house offered, buyers other than veterans have second choice. You may be able to get a prefabricated house, either from war surplus or commercially made; however, most of the available houses are "emergency" types and not designed for permanent use.

The prospective homeowner who hopes to build a single family house on his own lot will be faced with many difficulties because of unsettled conditions prevailing this spring. It will be better in most cases to defer building for at least a year or two, or until labor, materials, and equipment are in good supply in the community.

If you can wait a while for new housing, you will have a choice of better materials and can take advantage of the improvements that will be available. Lumber manufacturers will have better quality lumber than ever before. There are improvements in materials, equipment, lighting, and heating that are not yet in post-war production. New developments will include better insulation, improved millwork, and more durable finishes. Regardless of cost changes, the price situation will be stabilized and competition may bring a reduction in the cost of some items.

If your problem is to remodel an old house, you can do some of the work this year. Improvements such as painting, roofing, electric wiring, new heating systems, installation of plumbing, and structural changes may be carried out frequently with only minor difficulties in finding supplies and workmen. There is a limit

of \$400 per job on such work, however.

The government's program to stimulate the building of 2,700,000 housing units in 1946 and 1947 offers some encouragement, particularly for veterans who need housing. Although it may take several months to get a program under way, and there is still a serious shortage of materials and labor, the effect of the wide public interest and discussion of the question has been to center attention on housing, and a serious effort will undoubtedly be made to speed up construction of houses.

Building materials interests and members of Congress and others maintain that the price regulations act to restrict the production of much needed materials; on that account it may require price increases on building materials, or incentive payments to mills and manufacturers to make these materials available.

Early in January, ten critically scarce materials, including lumber, were put back on a priority basis. This was done in order that about two-thirds of these materials might be allocated to dwellings that cost \$10,000 or less, or that would rent for \$80 a month or less. The priorities will be granted only to veterans, however, or to contractors for construction for rent or sale, with veterans given preference.

If you are not a veteran you cannot get this priority on materials. This does not mean that you cannot build, but it does mean that you will have to compete with other home builders and the industrial and commercial demands for the limited amount of the materials that are free from priority requirements.



Under the conditions, there will be a temptation to invest in housing that is somewhat temporary in nature, and there

is certainly danger that some families will overinvest in housing. Before making up one's mind to buy or build, it will be advisable to study the family

budget carefully, and consider closely one's prospects for residing permanently in the community.

## Three New Flashlights

FLASHLIGHTS are again beginning to appear on the market, but their number has not been great. Some have had cases made of plastic and fiberboard—a trend which might persist for a considerable time as a result of the long tie-up of the steel industry by strikes. The best flashlight cases in the past have been made of brass, but a temptation to save a cent or two by using steel instead will probably determine future choice of materials. Unfortunately, many of the cases use very thin sheet steel hardly thicker than that used in making tin cans, and these are likely to suffer premature damage from corrosion or denting. (Non-metallic cases have an advantage, particularly over steel, in their being less subject to corrosion—when made of proper materials—from old, flashlight cells that have become leaky.)

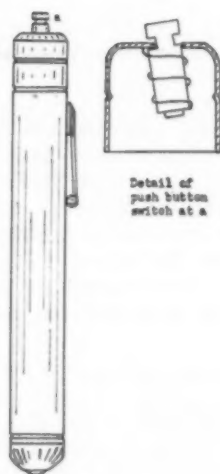
A brand recently examined is *Kwik-lite* (manufacturer unknown), which sells at \$1.49 in hardware and cigar stores and other outlets. The body is made of stiff fiberboard; on the end of this is attached a threaded metal sleeve for the plastic end to screw on; the threads on the sleeve were judged to be too shallow for long service. (Later models of this same brand had a thin sheet steel rather than fiberboard case.) Trim is of gray and red plastic, and the lens or

disk of clear plastic, which gives an advantage over the glass disks, that are often broken and are hard to replace. A pre-focused bulb is used, which gives a satisfactory light. The *Kwik-lite* flashlight is fairly well made, and it is believed will give reasonably good service. However, it should be remembered that flashlights are not really designed for long life and dependable service, in respect to certain details, particularly in the matter of contacts at switches and battery ends.

A more finished flashlight is sold under the Eveready name (Mfr: National Carbon Co., Eveready Division, New York City) at the price of \$1.25. This also has a pre-focused bulb; the lens or disk is of

glass; and the case, instead of being made of fiberboard or sheet iron, is of brass, a much more suitable material. Bright parts are very well plated and polished, which is an advantage in case the light should be dropped after dark or in a dimly lighted place. This flashlight is remarkable among all that have been examined so far in the precision of its reflector; the small light spot which this flashlight projects (about 3 inches in diameter at 3 feet) is unusually even in outline and illumination.

Pocket flashlights with a clip intended to fit over the edge of a pocket like a fountain pen are beginning to appear again. One of these, now being sold in variety chain stores, is priced at about 50 cents, complete with two "penlight" batteries. It bears no maker's name, but it seems satisfactory for its purpose. The on-off switch device is so constructed that momentary (push-button) contact can be made, or the light can be made to stay on continuously. As to these very small flashlights, however, remember that the small batteries ( $\frac{1}{2}$  inches in diameter by 2 inches long) have a very short working life, so such a light should be bought only for occasional and short-time use. These small flashlights, too, give a relatively very weak light compared with those using the  $2\frac{3}{8} \times 1\frac{3}{8}$  inch D cells.



# Washing Machines

## Second Report



### EDITOR'S NOTE:

**T**ESTS of two washing machines, the *Bendix*, an "automatic" washer, and a machine of the non-automatic type with power wringer, the *Maytag*, have now been completed, and our findings are presented herewith. (A preliminary report on the results of the tests for washing and drying effectiveness was given in the February 1946 BULLETIN.) Tests of other brands both automatic and non-automatic are proceeding as rapidly as samples for test become available.

Subscribers often assume that because well-known brands of washing machines (and certain other much-wanted household appliances) are either advertised or on display in dealers' showrooms, or may be found in mail-order catalogs, they are actually available for purchase and delivery to the consumer's home. However, this will rarely be the case; dealers' windows and mail-order catalogs are exhibiting many models of appliances for which orders are not yet being taken, or at least deliveries cannot be made. Subscribers, therefore, should not assume that an item is available unless they have actually investigated and learned that they can get immediate delivery. Even where a few are available, distribution is very uncertain and often very spotty, and the same article will be unobtainable in another city.

*CR is reporting on all the new appliances as fast as samples can be purchased for test, and test work completed; the findings will appear in the Bulletins with the least possible delay.* (There is no way, of course, of short-cutting the necessity of making actual and careful tests of performance, and in many cases, such tests are not a matter of a few hours' work, but of days and even weeks of careful study, measurement, and calculation.)

Most consumers who cannot afford to take an unnecessary risk in the purchase of an item that may not be good, will find that their best procedure will be to wait until dependable information is available, especially when the appliance may be an expensive one. It should be noted that there have been many inquiries to CR about findings on automatic washers of other brands than the *Bendix*. So far as we can learn at the time this is written, such washers, although advertised, and, perhaps in a few cases, exhibited in salesrooms, have not been actually produced in any significant number, because of strikes and other difficulties which have prevented manufacture in quantities.

### Automatic vs. Non-Automatic Machines

**T**HERE seems to be no question but that automatic machines are preferred by many housewives even though such machines (assuming that the performance of the *Bendix* may be typical of that of other automatic washers) do not wash the clothes as clean or leave them as dry as some of the better non-automatic types. Quite likely an automatic machine that will have a high washing effectiveness will be available and perhaps, some models which will shortly be on the market, and have not yet been tested by CR may give cleansing performance on a par with the best non-automatic washers. Drying the wash effectively may be a far more difficult problem for the automatic washers, for the unbalanced centrifugal forces involved in the necessary very fast rotation of an effective centrifugal dryer are very large, could cause quite severe vibration of the washer and excessive wear of parts. The relatively low speed of the *Bendix* rotation has reduced the unbalanced forces causing vibration to reasonable limits (of course at the expense of the drying ability). (The *Bendix*, however, appears to require bolting to the floor or to a concrete slab to prevent vibration and noise.)

The automatic feature appeals very strongly to housewives, even when it may be accompanied by the disadvantage of not getting clothes as clean as desirable, for many housewives find the washing of clothes the year round a wearisome and uninteresting job. Most of the time and effort involved can be eliminated by use of an automatic washer, because the homemaker can load the machine with dirty clothes, turn it on and proceed with other tasks while the washer completes its work of washing, rinsing, and partial water extraction, and shuts off, leaving the wash ready for re-

moval at the housewife's convenience.

## Wringers vs. Spin Dryers

The power-driven wringer of the old-style washing machine is an effective device for removing water from the family wash. However, unless the operator uses it with extreme care and vigilance, and avoids a number of possible, often almost unpredictable hazards, safety, even life itself may be menaced, for many people have been killed or badly injured by power wringer accidents. For small children the washer holds a special fascination, and a wringer-type washing machine should never be left unattended on wash-day, whether it is running or not. When the washer is connected to the power lines, a child can start it into operation by pushing a switch and moving a lever. The very careful parent would probably be justified in taking steps to prevent a child's plugging a disconnected washer into a wall socket, for an especially active and energetic youngster may even imitate its mother's actions and plug the washer in just to see what would happen.

There are, of course, many people owning wringer-type machines who have used them for years without accident, but on the other hand many others have lost their arms, or hair, or even their lives, in spite of the so-called safety releases with which such machines are equipped. Even when the safety devices meet the requirements of the Underwriters' Laboratories (discussed later), they fall far short of a real safeguard, as too much depends upon the presence of mind of the individual in an emergency. Few indeed when trapped by catching of hair, fingers, or loose garment, would be quick enough to operate the safety devices with certainty before serious injury could occur.

Unfortunately, because their cost is much lower, a great majority of the washing machines sold are of the power-wringer



As the above cases, a few of many on file, indicate, power wringers are not just a hazard in the home, but often a menacing danger.

type. (For example, in 1941 the average price of the wringer-type machines tested by CR was just a little over half the \$97 charged for the average non-automatic washer with centrifugal dryer (water extractor) mechanism. The scores of newspaper accounts in our files of serious injuries and deaths caused by power wringers should leave no doubt in anyone's mind as to the very real dangers which exist, and no washing machine with a power wringer, irrespective of its high qualities in other respects, can properly receive a recommended rating until such time as the designers can find means to equip such machines with a fully effective, easily operated, safety device. There will, of course, continue to be many, who for reasons of cost, will purchase wringer-type machines. To those CR can only urge the utmost caution in operating them, and in the closest possible supervision of others who may do so, and of any children who may be about. The medical and hospital bills for one crushed hand and arm or torn scalp may easily come to many times the price of one of the safer but more expensive washing machines.

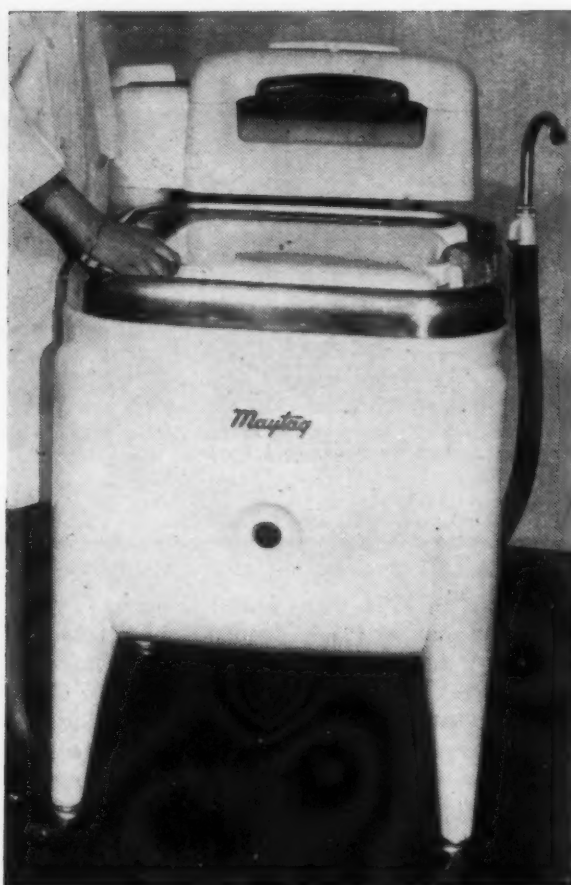
**Bendix** is the best known of all the so-called automatic washers. The model just tested by CR is claimed to have various improvements over the pre-war

model **Bendix**. The maximum load for the machine is 9 pounds of clothes. The working cycle is as follows: (1) A soaking period (which can be dispensed with if desired) requiring 6½ gal. of lukewarm water; (2) Washing period (6½ gal. of water at 125°F); (3) A first rinse (requiring only 2¼ gal. of water at approximately 100°F); (4) A second rinse (6½ gal.); (5) A third rinse (6½ gal.); (6) Partial extraction of water with centrifugal dryer.

Total amount of water for one complete cycle, 28¼ gal. (21¼ gal. if no soaking period used); of this amount 17½ gal. or 14 gal. were hot water (2, or 1½ gal. per lb. of clothes, assuming a hot water supply at 140°F, and cold water supply at 50°F). The complete cycle from the time the clothes were placed in the machines until they were ready for removal required 34 minutes for the **Bendix** (50 minutes when a pre-soaking period was used).

**Maytag** was a non-automatic wringer-type machine of a familiar type having a capacity of about 8 pounds of clothes and 16 gallons of water. After a washing period of 8 minutes (recommended by the manufacturer for badly soiled clothes), clothes were run through the roller wringer into a stationary laundry tub containing 16 gallons of rinse





water at 100°F. The wash was run through the wringer a second time into a second tub containing 16 gallons of rinse water again at 100°F, then again through the wringer. The total amount of water used for 8 pounds of clothes was 48 gallons; of this amount 31 gallons were hot water (4 gal. per lb. of clothes, assuming a hot water supply at 140°F, and cold water supply at 50°F). In actual home laundering practice, two or three 8-pound loads of clothes would be washed per tubful (16 gal.) of the original hot soapy water. When used in this way the *Maytag* would require about the same total amount of hot water, for a given quantity of clothes, as used by the *Bendix* (which requires fresh water for each load). The time required for washing, rinsing, and drying one load of clothes in the *Maytag* was 28 minutes when an 8 minute washing period was used, or 35

minutes with a 15 minute washing period.

### CR's Tests

Washing effectiveness was determined by washing samples soiled by a standard laboratory method (sewed to towels and sheets) of which the reflectance (whiteness), before and after washing, was measured by a photoelectric instrument known as a reflectometer. The meter-readings so obtained gave a measure of the relative washing effectiveness of the machines.

The washing effectiveness of the *Bendix* was found to be considerably less than that of the *Maytag*, and this was true whether or not a soaking period was used.

It was noted that the washing period of 8 minutes recommended for the *Maytag* was less than that provided in the *Bendix* cycle (12 minutes); it was also less than is customarily used by housewives

in home laundering. Additional tests were therefore made on the *Maytag* machine using a washing period of 15 minutes, to determine the effect of a washing time more characteristic of that used in the average home. This was found to increase the washing effectiveness by a significant though not great amount, perhaps 12 or 15 percent.

In order to obtain a comparison of washing effectiveness produced by these machines with commercial laundering, two sets of soiled samples were submitted to a commercial laundry to be subjected to their regular washing formula as used for white cotton goods, with no bleach to be used.

It was found that the *Maytag* washing machine, when the washing period was increased from the 8 minutes recommended by the manufacturer to 15 minutes, gave a cleansing action closely approximating that obtained in a commercial laundry (the laundry used was believed to be one of superior performance as commercial laundries go).

### Effectiveness of Drying.

With the *Bendix*, the water left in the clothes, expressed as a percentage of the dry weight of clothes, was about 127 percent (so that the original 9-pound load contained after completion of the mechanical water extraction by the *Bendix* dryer, about 11½ pounds of water, giving a total weight of 20½ pounds). The *Maytag* power wringer removed considerably more water (about 25 percent) than the centrifugal extractor of the *Bendix*. The amount of water remaining in the clothes was 97% of the original or dry weight. (The 8-pound load contained 7¾ pounds of water, giving a total weight of 15¾ pounds.) The extra water removal is very desirable, both from the point of greater ease of handling the clothes, and as an aid to quicker drying especially on humid days and in weather when clothes cannot be hung outside to dry.



From these tests it would appear that the advantage the *Bendix* has in being automatic (thus saving manual effort) is likely to be offset for some users by its significantly lower washing and drying effectiveness.

**Wear on Clothes.** This was determined by measurement of the lint removed by each machine from a standard test material during the complete washing and rinsing cycle, the lint being caught on a 325 mesh screen and weighed. The *Bendix* removed about 40% more lint than the *Maytag* and hence should account for somewhat greater wear of the clothes in washing; the total amount of lint removed, however, was quite small.

**Electrical Tests.** A washing machine must necessarily be operated with the user's hands wet and in the presence of grounded water pipes and electrical connections, and with wet floors. Under conditions of high humidity, electrical safety is exceptionally important. Electrical leakage current tests were therefore made to provide a judgment of shock hazard, on the machines as received, after 48 hours at a temperature of 90°F and 90% relative humidity, after completion of the 100 hour endurance run and 48 hours after the machine had cooled to room temperature. The *Bendix* exceeded the allowable leakage current in all tests except that at the end of the endurance run. The *Maytag* showed leakage above the recommended limit only in one case, in the final test 48 hours after the machine had cooled to room temperature. Provided the machines were grounded by running a special wire from a secure attachment on the frame of the washer to a permanent connection on a water pipe, these leakage currents or leakage from later defects of the insulation would not normally be of any serious significance. (All washing machines should be grounded in this manner to safeguard against shock

from insulation breakdown, which can occur at any time, with any washer and can not be guarded against 100% by any practicable means. Both machines passed a 900 volt proof voltage (over-voltage) test.

**The Starting Current.** The maximum starting current load for the *Bendix* was 30.5 amperes and for the *Maytag*, 26.5 amperes. Assuming the washing machine to be the only appliance connected to the circuit, the circuit would require a 15-ampere fuse for the *Maytag* and a 20-ampere fuse for the *Bendix*, to avoid frequent fuse burnouts at starting the washer.

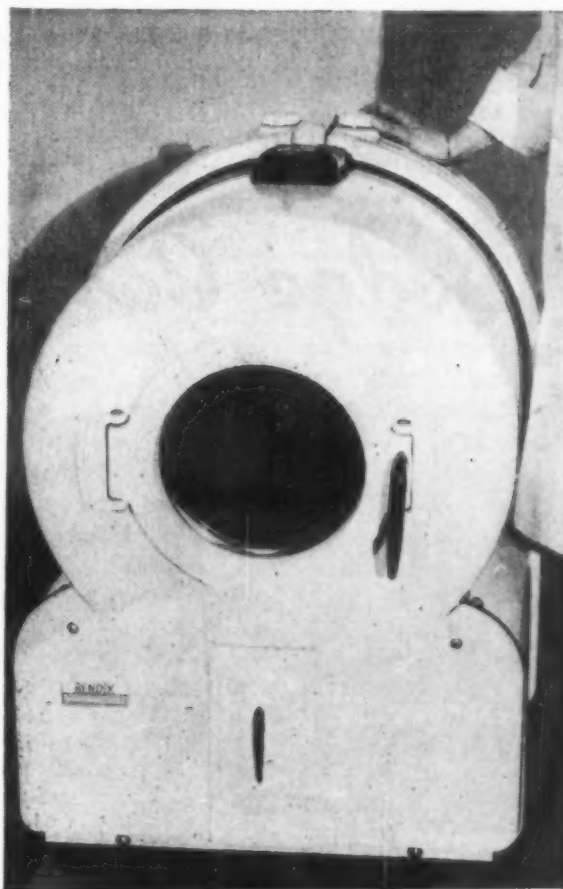
**Wringer Safety Test of Maytag Washer.** A test board  $\frac{3}{4}$  in. thick, 8 in. wide, 15 in. long, tapered at both ends, was placed between the rolls and the wringer was stopped with the rolls engaging the board near its center. The force required to operate the release mechanism

was measured with a calibrated spring scale. This force was found to be 10 lb., which fell within Underwriters' Laboratories requirements, but as CR has pointed out previously, meeting such a requirement does not guarantee the user's safety. When released, the rolls permitted a 2 in. clearance, which also met an Underwriters' requirement.

**Endurance Test.** Each machine was operated daily until 100 hours of actual use were accumulated. No failures occurred on either machine, but an occasional loud hum occurred in the *Bendix* when in the rinse position. This was attributed to chatter of the drain valve solenoid. A slight increase in noise was observed in both machines at the end of the 100 hours endurance test.

### Comments and Listings

*Bendix.* The special Phillips head screws employed in the back



of the machine will call for use of several special screw drivers (not owned by the average home mechanic) when it becomes necessary to service the machine in the home. If the door should be opened while the machine is operating, the contents of the machine would fall out of the tub.

**Maytag.** Use of both hands was required in order to operate the wringer roll lock, and the agitator clutch button had to be pulled out quickly and surely for positive engagement. If the control was not pulled out completely, a loud clashing noise resulted. One unsatisfactory feature of the *Maytag* was that it was necessary for the user to stoop in order to operate clutch and drain pump controls. In order to service the *Maytag* pump easily, the machine must be turned upside down or on its side. While this is not permissible with some machines, because of the leakage of oil from the crankcase, no leakage occurred when this was done with the *Maytag*. Replacing a broken or worn drive belt was found to be quite difficult, requiring prior removal of the pump and drain hose.

## B. Intermediate

**Bendix, Model S** (Bendix Home Appliances Inc., South Bend, Ind.) \$169.50. "Automatic," rotating cylinder type. Maker's capacity rating 9 lb. Effectiveness in washing, fairly good; in drying, fair. Ease of operation, excellent; overall construction, good; ease of cleaning and minor servicing, good. (The services of a specially qualified repairman will be required for all but strictly minor repairs.) Small electrical leakage current under certain conditions (see text). Manufacturer recommended oiling by authorized serviceman at least once a year and twice a year under severe conditions. Consumers will have to decide for themselves whether the advantage of automatic operation is sufficient in their own case to offset the disadvantages of somewhat less clean clothes and less satisfactory drying. To some extent, the decision will depend upon the individual requirements, the availability of help in the laundry, the homemaker's personal standards as to required whiteness of the finished wash, whether most of the clothes are badly or slightly soiled. (Standards of required whiteness of laundered articles are probably lower in cities and towns where water is hard to very hard, where a great deal of soft coal is burned, or there is much factory smoke, for in such locations it is difficult to obtain relatively

complete removal of sooty particles in any case, and a degree of grayness of fabric may necessarily be tolerated.

**Maytag, Model E2-LP** (The Maytag Co., Newton, Iowa) \$139.95, with cast aluminum tub. Conventional non-automatic power-wringer type. Agitator type of washing action. Maker's capacity rating 8 lb. Washing effectiveness with 8 min. washing period good; with 15 min. period excellent, closely approximating that of a good commercial laundry. Effectiveness in drying clothes, good. Overall construction, good; ease of operation and cleaning, good; ease of servicing, only fair. Certain wringer-roll ball bearings are to be oiled each month; other oiling is required twice a year, except the motor, which can go for 5 years, then needs authorized serviceman's attention.

**Important Note.** In the past CR has never rated washing machines with power wringers higher than *C. Not Recommended*, irrespective of their qualities in other respects. In view of the present critical shortage of home washing machines of all types, and the fact that wringer type machines will probably be the only ones available in appreciable quantity for some time, the better and safer machines of this type will be rated *B. Intermediate*, for the present.

# Dodge Cars for 1946



Dodge De Luxe 4-Door Sedan

**Dodge** publicity claims for the 1946 cars "sixty design and engineering changes [which] make this the most sweeping model change in Dodge history." Actually the basic changes made appear to be substantially the same as those made in *Chrysler* cars for 1946. The new front-end styling differs appreciably from previous models. The grille is of the so-called "massive" type with horizontal bars having vertical overlay bars (stainless steel), while the lines at the forward

end of the hood are similar to those characterizing *Chrysler* cars. Treatment of the front fender lines, blending into the doors, is also similar to the *Chrysler* for 1946. Both front and rear bumpers are of the new "wrap-around" type affording greater fender protection. Interiors have been restyled with new instrument panel, which is said to provide safer, non-glare lighting. Wick lubrication has been used for the speedometer along with an improved color warning dial for the various speed ranges. The starter pedal has been replaced by a button on the panel (as on the *Chrysler*).

More even flow of power and new smoothness at all speeds is attributed to the Fluid Drive,

plus an improved engine manifold design. Aluminum pistons are again used. Auxiliaries inside the hood also have been rearranged and include a new plastic wrapped and sealed wiring harness, placing the battery in a cooler location, while there is "nothing hung on the cylinder head studs but the cylinder head." While this is asserted to be a way of making the engine easier to service, the location of accessories around the engine is such that no substantial improvement from the standpoint of ease of servicing seems to have been made.

Other mechanical changes include the improvement of front brakes as on *Chrysler* cars, continuance of the safety rim type wheels, and the new

fuel tank filter (*Oilite*) described in connection with the discussion of the *Chrysler* car in the April 1946 BULLETIN. A new bumper jack is also supplied.

The 4-door sedan will be the first body type available, but two complete lines of cars with eight body styles in ten colors will be offered as soon as production conditions permit. The De Luxe line includes in addition to the 4-door sedan, a three passenger business coupe and a 2-door sedan. In the custom line are five body types, a 4-door sedan, a custom convertible coupe with push-button top control (electrically operated), six passenger club coupe, seven passenger sedan, and custom town sedan.

## Mayonnaise - CR's Test of Six Brands

MAYONNAISE has been hard to find on the grocer's shelves during the past year or two. In the main, the scarcity has been due to government restrictions on the use of salad oils. Increased demand for mayonnaise to help take the place of the still harder to find butter in making sandwiches and seasoning vegetables has been a factor also. Some mayonnaise manufacturers have shifted to production of salad dressings which use less oil than mayonnaise.

The federal definition of mayonnaise, with which all products of that name must conform, is: The semi-solid emulsion of edible vegetable oil, egg yolk or whole egg, a vinegar, and/or lemon juice, with one or more of the following—salt, other seasoning com-

monly used in its preparation, sugar, and/or dextrose. The finished product contains not less than 50 percent of edible vegetable oil. The original standard called for a finished product that contained not less than 50 percent of edible vegetable oil, and the sum of the percentage of oil and egg yolk was to be not less than 78 percent. Many manufacturers, however, were reported as taking the position that such a standard was too high to be met "commercially." Subsequently, it was modified to the one presently in effect.

For salad dressings there are no federal definitions or standards except for one set by the OPA for purposes of price control. The North Dakota Regulatory Department, Division of Food and Chemistry, has

proposed the following for salad dressing exclusive of mayonnaise, Thousand Island, French dressing, and similar products: The semi-solid emulsion of edible vegetable oil, egg yolk or whole egg, a vinegar, water, and/or lemon juice, with one or more of the following—salt, other seasoning commonly used in its preparation, stabilizer and sugar; the finished product to contain not less than 35 percent of edible vegetable oil and not less than 5 percent of egg yolk.

It will be readily seen that this proposed standard defines a product that is essentially a diluted version of mayonnaise, with less oil and with a stabilizer added. The latter, which is designed to help maintain a uniform emulsion that will not break down in storage, may be



flour, cornstarch, soybean flour, gum tragacanth, gum arabic, pectin, Irish moss, casein, or condensed milk. Apparently, however, the North Dakota's suggested definition resulted in a product that was too high in quality for the industry generally to supply. The OPA, for purposes of price control, defined salad dressing on a much lower basis of quality as: The wholly or partly cooked or boiled semi-solid emulsion of edible vegetable oil, egg yolk or whole egg, vinegar, water, and/or lemon juice, with one or more of the following—salt, and other seasoning commonly used in its preparation, sugar, and/or dextrose, starches or other edible moisture absorbing agents. The water and the starches are added to stretch out the more important ingredients such as oil and egg.

As to mayonnaise, although some manufacturers make a practice of declaring the ingredients on the label, they are not required to do so. Under provisions of the Food, Drug and Cosmetic Act, a product which conforms to the established standard of identity for such products need not list its ingredients. Since there are no official standards, however, for salad dressings, all ingredients of that type of product must be listed on the label.

The oils customarily used in commercial mayonnaise are cottonseed oil and corn oil, depending on the time of the year. Strictly from a manufacturing standpoint, cottonseed oil is preferred for the product sold in the summertime because it produces an emulsion with the egg yolk that keeps better during hot weather. Corn oil, on the other hand, produces an emul-

sion that has better resistance to freezing and hence is more likely to be used in mayonnaise sold during the winter months. There is also a special processing of cottonseed oil called winter-pressed which reduces to a minimum the proportion of the oil which tends to become waxy or solid at low temperatures, and so renders the oil suitable for use in cold weather. Olive oil is seldom used in commercially produced mayonnaise, although it makes a very palatable product. From a commercial standpoint, the disadvantage of olive oil is that mayonnaise made with it did not keep well on the shelf and became rancid more quickly than mayonnaise made with corn or cottonseed oil. Olive oil is also considerably higher in price than all the commonly used food oils. Some manufacturers asserted that the flavor of olive oil was not popular with the majority of American consumers. From a health standpoint, it is, on the other hand, better tolerated by some, for, as CR has previously pointed out, allergy to cottonseed oil is not uncommon and those who have a sensitivity to it will need to avoid use of commercial mayonnaise and salad dressings containing it, altogether.

During the recent shortage of salad oils, mayonnaise made with mineral oil has been extensively sold in many parts of the country. Heretofore, mineral oil had been used in mayonnaise-type and other salad dressings by women on a reducing diet. In the past three or four years, however, mineral oil dressings have made their appearance in hotel dining rooms without any notice to the unwary consumer that he was being served a laxative

in disguise. In California, the situation was so troublesome that the law enforcement officials were obliged to take special steps to see that California's law that "a food shall be deemed adulterated if any mineral oil has been added thereto, mixed or packed therewith" was strictly enforced.

Mineral oil as a laxative has come to be regarded with disfavor and is even considered to be injurious to health. It has a tendency to absorb vitamin A and since the oil itself is not digested by the body, it causes loss of needed vitamin A as it passes through. It interferes with the body's utilization of the essential minerals phosphorus and calcium, and is also considered to be irritating to the intestinal tract. In any event, mineral oil has no place whatever in food for general sale.

So far as nutritive value is concerned, commercially made mayonnaise is essentially only a source of energy or calories. It has been estimated as furnishing about 3000 calories per pound due to its fat (oil) content. Corn and cottonseed oil contain only traces of vitamin A and practically no other vitamins. Since the amount of egg used is small and, according to one source, most manufacturers use frozen or dried eggs, it is obvious that the food value of mayonnaise in the quantity commonly used is pretty close to zero, for all practical purposes.

In order to discover whether or not there had been any deterioration of quality in mayonnaise due to wartime shortages, CR had a number of well-known brands tested by a competent firm of consulting food chemists to determine conformance with the



government standard. All brands tested easily met the standard and were well above the government requirements with respect to oil. It will be noted that some brands contain a higher percentage of egg than others and so will have a slightly higher food value; however, the differences would not appear to be sufficiently great to warrant higher ratings.

#### A. Recommended

**Homemade mayonnaise.** Made with fresh egg yolk and olive or peanut oil. Helpful hints: Mix vinegar, mustard, salt, with slightly beaten egg yolk before adding oil. Add the oil beneath the mixture by inserting two large tablespoonfuls of oil under the surface rather than using the conventional method of adding it drop by drop from the top. Keep the mixer at a low speed (its lowest speed, if an electric mixer). After the oil and egg yolk have been thoroughly mixed, the rest of the oil may be added at a faster rate and the speed of the mixer increased. The egg used should be neither too fresh, nor too old; one authority considers an egg several days old will give the best results.

#### B. Intermediate

**Ann Page Mayonnaise** (The Great Atlantic & Pacific Tea Co., 420 Lexington Ave., New York 17) 8 fl. oz., 16c. Ingredients declared on label: Salad oil (cottonseed and/or corn oil), eggs, vinegar, spices, dextrose, and salt. Essential ingredients of sample tested judged to be egg yolk, 6.3%; vegetable oil, 82.1%. Consistency, heavy. Flavor, well balanced.

**Hellmann's (Blue Ribbon) Real Mayonnaise** (The Best Foods, Inc., 88 Lexington Ave., New York 16) 8 fl. oz., 20c. Essential ingredients of sample tested judged to be egg yolk, 3.9%; vegetable oil, 78.9%. Consistency, very heavy. Flavor, well balanced.

**Kraft (Kitchen Fresh) Mayonnaise** (Kraft Cheese Co., Div. National Dairy Products Co., 500 Peshtigo Court, Chicago 11) 8 fl. oz., 23c. Information on label: A skillful blend of choice ingredients including fresh lemon juice. Essential in-

gredients of sample tested judged to be egg yolk, 3.1%; vegetable oil, 76.8%. Consistency, very heavy. Flavor, well balanced.

**Mrs. Schlörer's Mayonnaise** (Mrs. Schlörer's, Inc., 2525 Dickinson, Philadelphia 46) 8 fl. oz., 35c. Essential ingredients of sample tested judged to be egg yolk, 5.5%; vegetable oil, 78.5%. Consistency, moderately heavy. Flavor, spiced, mustard predominating.

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The following were considered to be of slightly less desirability on one point than the brands immediately preceding.

**Old Monk The World's Finest Mayonnaise** (Old Monk Co., 718 N. Aberdeen, Chicago 22) 8 fl. oz., 38c.

#### THE COLLEGE OF ST. CATHERINE

Claims on label: A skillful blend of the finest ingredients. Tested and approved by Good Housekeeping Bureau. Essential ingredients of sample tested judged to be egg yolk, 6.6%; vegetable oil, 74.2%. Consistency, light. Flavor, well balanced. Appearance, poor, oil separating.

**Premier Mayonnaise** (Packed by Francis H. Leggett & Co., 12th Ave. & 27th St., New York 1) 8 fl. oz., 39c. Claims on the label: Made from vegetable oil (cottonseed and/or corn) cider vinegar, egg yolk, salt, and spice. Essential ingredients of sample tested judged to be egg yolk, 9.6%; vegetable oil, 71.9%. Consistency, moderately heavy. Flavor, lacked sweetness, acid flavor predominated.

## Appliances are Not Really Available

**P**ARTICULARLY within the last few months, CR has been receiving many requests for information on articles, especially electrical and mechanical appliances, which consumers have assumed are available because they have been advertised or are displayed in store windows. Subscribers write in, wanting to know whether such and such a washing machine, electric toaster, lawn mower, or food mixer has been tested and is a good buy. The answer in most cases is simply this: We don't know; nobody *can* know yet; nobody has seen this particular device (except possibly in store windows, or illustrated in a mail-order catalog). It is not actually on the market for sale to the general public. All who

read the newspapers have read about long-continued strikes involving well over a million workers in the most essential industries, but many have forgotten perhaps that such strikes have completely crippled production of a wide range of goods and appliances used by consumers, and in a large proportion of cases have held back manufacture of vitally necessary items for months. There are supply and other relationships between many of the country's largest manufacturing concerns which the consumer does not know about, that have been the cause of basic shortages. Such a relationship between radio tube manufacturers and other firms has determined the present extreme scarcity of radio tubes,

which, with other radio parts, are harder for dealers to get than they were during the period when the government was taking nearly all radio production for war purposes. The latest information indicates that normal production of electrical appliances may not begin until fall, and even that estimate is based on the assumption that no further unexpected or crippling strikes intervene. A long strike in the coal industry, for example, might tie up basic production of steel and other necessary materials for several months longer, into the winter months of 1946-47.

The consumer is likely to assume that the advertising and listing of an article or showing of it in a dealer's salesroom means that it is available; however, that may not be the case at all, for the manufacturer or distributor will be likely to exhibit the item whether he has it for sale or not, for the purpose of building up "sales potential," pending arrival of real supplies later on, sufficient to meet consumers' demand.

Before inquiring of CR about a new appliance, it will always be well first to find out if the things you saw or saw advertised are really available for purchase and delivery to your home. Endeavors by CR to purchase a number of mail-order catalog items which purported to be available for immediate purchase showed that they were not. On a recent order for eight items, including two common electric appliances, a radio, auto accessories, sent by CR to a mail-order house which had shown them in a new special seasonal catalog, only two minor items were received (within three weeks). A subsequent order for four ap-

pliances was likewise not filled. On an order for eight articles including an electric drill, a scale, dry cells, to another mail-order house, the items named did not come; the only major items received were two battery chargers. In these instances the reader of the catalogs would not have had the slightest reason to suppose that he would not promptly receive the items listed, in response to his check or money order.

As a rule, Consumers' Research cannot test goods until they are *available* in the market, although with a few appliances we are able to "jump the gun" a bit by asking manufacturers to send us some samples in advance of actual sale of these items by retail stores. That can be done to only a limited extent, however, since most manufacturers do not wish to lose a single specimen from their regular market at this time, when it is so difficult to meet even a fraction of the demand from dealers and ultimate consumers. In any event, the method has its limitations, since some of the advance samples for display purposes are not representative of what will appear on the market when the appliances are really being made in volume. They are produced primarily to give the dealer something to talk about, and the customer something to look at. (Dealers well know that consumers will not place orders or be in a mood favorable to placing orders if they must do so on the basis of something which they have not even seen.)

For the information of all subscribers, note that CR has planned to conduct tests on most of the appliances of major importance to consumers, both large and small. In a few cases

these have been begun, and reports have been written and printed or will be in the near future; in other cases, the tests will be carried out just as soon as samples for test can be purchased.

Test reports will appear in *the Bulletin* as soon as possible thereafter. Such reports, of course, cannot be ready, if they are to be reliable guides to purchase, at once upon the appearance of the item in a store window or in a mail-order catalog. (Under present conditions, however, special efforts are being made to shorten the time between the first availability of the new items and our report on them to our readers.)

It is important to have in mind that in many fields, if not in most, the first post-war appliances will be the same models as were available just before the factories converted to war production in the spring of 1941. This general practice of following pre-war models in their first post-war production was necessitated by the extreme difficulties of factory reconversion due to scarcity of engineering and other specialist help, strikes causing shortages of steel, machinery, and parts, and many other factors that can only be appreciated by those who have closely followed the newspapers and trade journals to see the numerous and cogent reasons that have operated to prevent actual mass production of goods consumers need and have waited for for years. Some items of the many that are especially hard to get are electric washers, refrigerators, vacuum cleaners, heating pads, automobiles, automobile accessories, and scores of other necessary and now long overdue items.

# Coated Lenses—

## Quarter-Wave Anti-Reflection Coatings for Photographic Lenses

ONE of the few really important advances in photography which have occurred in recent years is the development of processes for applying to the elements of photographic lenses a thin coating of a material which acts to decrease to a marked degree the reflection which takes place at each glass-air surface.

### The Problem of Light Loss in Lenses

When light falls upon a glass-air surface at right angles, a definite proportion is reflected back toward the source, depending upon the index of refraction of the glass; for the types of glass generally used in photographic lenses, the amount of light reflected at each surface with normal ("head-on") incidence of the light beam averages about 5 percent. Since 5 percent of the remaining light is reflected at each successive glass-air surface, the image-forming light which finally emerges from a lens which has  $x$  such surfaces is about  $(0.95)^x$  of the light which enters ( $0.95$  multiplied by itself  $x$  times). For the types of lenses in common use, the percentage of image-forming light transmitted, and lost, according to this rule, would be as given in the accompanying table.

Because light actually falls upon a lens at many angles, the actual loss of image-forming light is greater than the figures indicate.

In view of the latitude of emulsions, this loss of from 10 to 34 percent, sometimes even more, of the image-forming light is of no great consequence. The real harm arises from the fact that the light reflected at each glass-air surface is by no means all reflected out of the lens. Part is reflected back and forth in the lens, from one surface to another, and finally into the camera, where it acts to form a veil of diffuse illumination or fog, and in many cases, depending upon the construction of the lens, even one or more "flare spots" of sufficient intensity to produce a false or ghost image upon the emulsion. In general, the more strongly curved the lens sur-

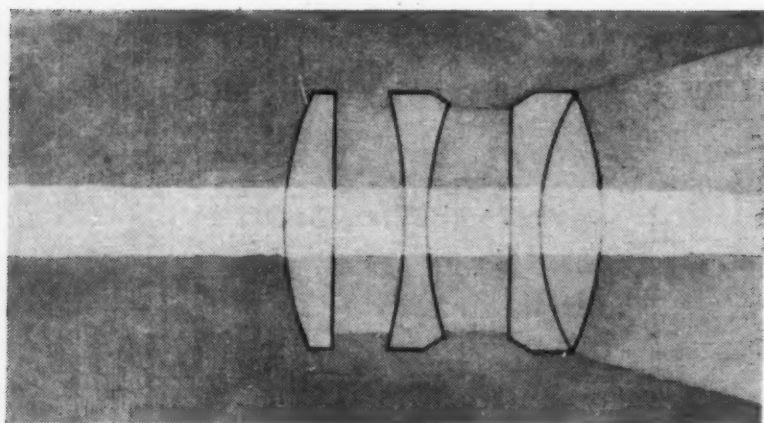
faces, the more trouble there is to be expected from flare and stray light. The newer and faster emulsions tend to record flare spots to a greater extent than did the less sensitive older ones. Reducing the amount of the scattered, unwanted light helps in giving improved rendition of shadow detail, as well as in giving increased contrast to the image, and even in improved apparent definition, due to the better contrast.

### How the Lens Coating Works

The exceedingly thin fluoride films which are now being applied as lens coatings take advantage of the principle of the interference of light; they are of such refractive index and of such thickness that the rays reflected from the glass and

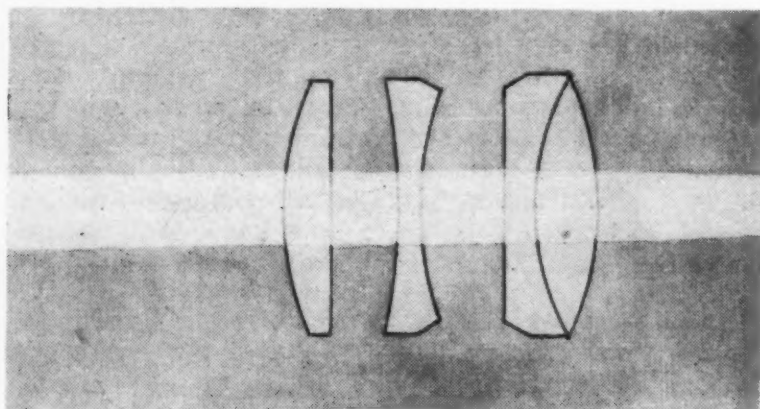
No. of Surfaces	Type	Light Transmitted	Light Lost
2	Single achromatic lenses of box cameras	90%	10%
4	Rapid rectilinears and such lenses as Dagor, Protar, etc.	81%	19%
6	Tessar, Triotar, etc. (A large number of lenses are in this class, as to amount of light loss)	74%	26%
8	Dogmar, Aviar, etc.; also many of the new fast lenses	66%	34%





**Figure 1**

*This diagram shows how light reflected from glass surfaces of an uncoated lens arrives at the plane of the negative as a diffused haze which interferes with image contrast and may produce flare.*



**Figure 2**

*This diagram shows how in a coated lens the reflection from glass surfaces, and hence the haze, tends to be eliminated so that the light reaching the negative surface and forming the image is relatively free from contamination by scattered or diffuse light.*



from the coating on the lens tend to cancel each other out. This requires that the coating have a refractive index of about the square root of the refractive index of the glass, which means a range of about  $\sqrt{1.5}$  to about  $\sqrt{1.7}$ , or 1.23 to 1.31. For complete cancellation of the reflected ray, the film should have a thickness of one quarter of the wave length of the light, or about five millionths of an inch. Obviously this can be accomplished for only one wave length, but it has been found that when a

coating is applied which is correct for the middle of the spectrum, the improvement effected for all wave lengths that are useful in producing active effect on the plate or film is well worth while. The films used for the purpose are applied by evaporating metallic fluorides under high vacuum.

For any lens which has more than four glass-air surfaces, the quarter-wave coating has a substantial effect in reducing the amount of diffuse or contrast-destroying light spread over the area of the negative

(though the coated lens does not by any means have advantages of the magnitude and importance that the advertising of some promoters of the coating process have claimed).

It must be noted that where the contrast between the high lights and the shadows is small or normal, the visual difference between the photograph produced by a coated lens and an uncoated lens will as a rule not be detectable by the eye. The advantages of the coated lens will show up very little under usual photographic conditions. Coated lenses will be useful for taking pictures indoors where lens glare is present from light streaming through bright windows or other strong sources. For those whose pictures are of the more usual kinds, or are taken mainly out-of-doors, having a lens coated is likely not to be worth the investment and risks involved. It must be borne in mind that if the pictures taken are to be enlarged, the enlarger lens must also be a coated one if the best results are to be obtained.

Some manufacturers of photographic lenses have announced an intention of supplying coated lenses as regular production, and it is to be hoped that all will follow suit.

### **A Coating Job Often Undesirable**

For the photographer who already owns an uncoated lens, there is a grave question as to whether the risks involved in having it coated will not more than offset the advantages to be gained. A lens is a delicate affair, and its resolving power (sharpness of image) may be significantly impaired even by the screwing of a cell too tightly into the mount or shutter. To prepare a lens for





Coated Lens

Figure 3

Uncoated Lens

*Simultaneous pictures taken with stereo camera, with one coated lens and one uncoated. Normal lighting conditions. The increase in effective light transmission and absence of flare light is plainly evident in the left-hand picture taken with the coated lens. Apparent definition (sharpness of picture) is also improved, due to better contrast.*



Coated Lens

Figure 4

Uncoated Lens

*Pictures taken with camera facing almost directly into the light but lenses shielded from direct rays of the sun. Ghost images are present in both pictures, but much more evident in the right-hand picture, taken with the uncoated lens. Fog due to scattered reflected light has caused increased density in the negative of the picture (at right) made with uncoated lens.*

Photos above were made with stereo camera and lenses lent for CR's use by Bausch & Lomb Optical Co.

coating, each element must usually be removed from its sub-mount first. Many lenses are "spun" into the sub-mount, while others are held in by a threaded ring; in removing the

glass from either type of sub-mount there is a risk, depending upon the experience, skill, and care of the workman, of setting up strains or of scratching the highly polished sur-

faces. Next, any cemented units must be completely disassembled and the surfaces cleaned of old cement, with the risk again of either strain or scratching. (One firm claims

to use a process that coats at temperatures low enough not to require that a cemented cell be disassembled.) There is always of course a danger that a glass may be cracked either by being accidentally dropped or from the considerable degree of heat involved in coating processes. *Unless the work is done by the original manufacturer*, there would be little possibility of replacement of a damaged, chipped, or broken glass. There is the further possibility that the lens may be subjected to straining forces while being replaced in its sub-mounts and mount. At least one firm insures the cameras and lenses against damage or

loss while in their hands, but the values placed upon the equipment are low (OPA ceiling price which is far below the market value and replacement cost in many cases); and if the equipment should be damaged or lost the owner, at the present time, will have reason to be very sorry that he took the risk of having a coating job done.

If the work is entrusted to the original manufacturer, who has the proper facilities for handling the lens, there is fair assurance that the lens will be correctly reassembled; otherwise it may not be properly centered, or the separation of the elements may not be cor-

rect, for lens-assembling and centering is a very delicate art and calls for great skill and fine instruments. The slightest deviation in either respect may have an adverse effect upon the sharpness of the image formed by the lens, and what started out as a first-class uncoated lens may very well end up as a coated one of quite unsatisfactory performance. On the whole, if a coated lens is really needed for the special type of work that has been mentioned, it would probably be more satisfactory to sell the old lens and buy a new coated one—even though the cost would be greater in handling the matter in this way.

## Aquella

UNUSUAL interest has been developed by publicity given in magazine articles to a product asserted to be the answer to the prayer of a man who has a wet or damp cellar wall. The material is marketed under the name of *Aquella* by Prima Products Inc., 230 Fifth Ave., New York 1. It is made by Aquella Products Inc. (formerly Modern Waterproofing Paint Co.). One highly laudatory article which made *Aquella* out to be perfection itself in the way of waterproofing material appeared in *The Reader's Digest* under the title "Water Stay Away from My Wall." *The Reader's Digest* story seems to have been more in the nature of a publicity story rather than a critical and careful scientific analysis which *should* have been given to their millions of

readers on such an important question. Actually, *The Reader's Digest* discussion was not only lacking in accuracy but contained false and misleading statements—statements which would tend to eliminate any caution a consumer might and should have in buying a product making such positive unqualified claims in paid advertising as "quick, amazing, scientific way to waterproof your basement." "Expanding . . . to form a solid, watertight seal *which continues to harden with age.*" "If miraculous waterproofing could have saved the Maginot line *Aquella* would have saved it."

The prestige of the National Bureau of Standards as a testing agency was drawn upon in the boost for *Aquella* in *The Reader's Digest* article, and it was asserted that in recent tests

by the Bureau on waterproofing treatments, only two had been rated "excellent and both called for specially built walls." According to a circular letter distributed by the Bureau of Standards, *eleven* were rated excellent by the Bureau when first tested on the exposed faces of ordinary walls and nine were rated excellent after an exposure of 12 or more months outdoors, and as it happened, *Aquella* was rated only good when first applied to the inner faces of walls, and was rated poor after the twelve-months' exposure period. (*The Reader's Digest* incorrectly said that "Tests won *Aquella* a rating of 'excellent' on ordinary brick or concrete walls, and whether applied on the inner or outer face.")

The most significant point of the Bureau's test was that the

majority of the treatments which were found to be excellent consisted of *Portland cement*, either with or without additions of hydrated lime (up to 45%) or other simple non-proprietary materials. It is interesting to note that the bags containing *Aquella* bear an approval of the City of New York Board of Standards and Appeals, but this approval was based on the Bureau of Standards tests already mentioned, and furthermore the actual approval was a qualified one. That is, the approval was to apply only when *Aquella* was not used over masonry surfaces that had been painted or treated with a material that fills the pores in the masonry (and practically any treating material that the householder might have used to improve the conditions of a moist or leaky wall would do that), and further the approval recommended that each application of *Aquella* should be carried out under the supervision of the manufacturer or his agents to insure proper mixing and application and to ascertain the correct degree of moisture in the surface to be treated prior to application. Such an approval is, of course, not an approval at all in the consumer sense of the word, and the consumer who buys *Aquella* on mail-order on the basis of city newspaper advertising is very unlikely to carry out any application of *Aquella* "under the supervision of the manufacturer or his agents." The *Aquella* advertisements we have seen do not mention these disadvantages; thus most consumers who buy *Aquella* will not know until they have got the product home and have read the directions that it cannot be used on a basement wall that has been

previously calcimined, white-washed, bituminous coated, painted or treated with an organic waterproofing compound "unless such coating has been completely removed." Most basement walls with water

seepage difficulties will be in the older houses, walls which in a good many cases will have been painted or treated to reduce dampness difficulties at one time or another, so that it is safe to assume that even if the

**Reader's Digest**  
TOLD ITS ROMANTIC STORY!  
AND BRINGS IT STRAIGHT  
TO YOUR HOME!

**Aquella...**  
quick, amazing  
scientific way  
to waterproof  
your basement  
**3.95**

8-4-pound bag  
(includes gallon of water)

b) AQUELLA No. 3 is intended for EXTERIOR surfaces of materials named above.

2. UNACCEPTABLE SURFACES:  
AQUELLA and AQUELLA No. 2 may not be used directly over bituminous, kalsomined, whitewashed or other surfaces which have been treated with an organic waterproofing compound unless such coating has been completely removed.

3. STORAGE:  
AQUELLA will keep indefinitely when stored in a dry place in its original sealed containers.

**REMEMBER!!**  
AQUELLA WILL FUNCTION EFFECTIVELY IF:

1. Applied on untreated and clean porous masonry surfaces in accordance with manufacturer's directions.
2. Surfaces are properly wetted BEFORE and AFTER application of each coat.
3. Damp-proofed and waterproofed surfaces are not pierced by means of screws, nails, toggle bolts and the like.



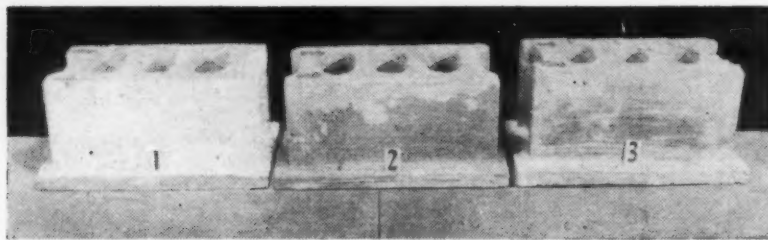


Figure 1

No. 1 block treated with Kay-Tite, No. 2 treated with Aquella, and No. 3 treated with Portland cement. No. 2 and 3 showed in the original photograph, evidence of some moisture penetration.

product did all that is claimed, it would have a limited field of application, especially in view of the fact that it *should* be applied under the supervision of the manufacturer or his agents.

### CR's Tests

A chemical analysis of *Aquella* showed the principal constituents to be about 43% silica, 40% calcium oxide, 7% alumina. Thus the composition of *Aquella* appears to be similar to that of Portland cement plus added calcium carbonate and some silica (sand). *Aquella* No. 2 for exterior use, is the same qualitatively as *Aquella* but is slightly different quantitatively, the chief difference being that it contains slightly more calcium oxide (lime) and slightly less silica (sand). The profit to the promoters of *Aquella* must be very satisfactory, for it retails at \$3.95 for a bag containing 8.4 lb. or 47 cents a pound, which is 63 times the price of ordinary Portland cement purchased at retail.

To test the effectiveness of *Aquella* in comparison to Portland cement and another product called *Kay-Tite*, 3 porous concrete building blocks were embedded in a slab of a cement-sand mixture. (See Fig. 1.) One was given two coats of *Aquella*,

the maker's instructions being scrupulously followed. The second block was given a single coat of Portland cement mixed and applied according to instructions given in U.S. Department of Agriculture Farmers' Bulletin No. 1572, "Making Cellars Dry," which called for mixing Portland cement and water to make a mixture of heavy pasty consistency and brushing this on to the surfaces to be treated. The third block was treated with *Kay-Tite* (*Kay-Tite* Co., West Orange, N.J., \$2.90 for 10 lb., plus postage). Analysis of *Kay-Tite*, reported in May 1945 BULLETIN, showed that it was a proprietary Portland cement preparation consisting essentially of calcium silicate and calcium aluminate.

The instructions for *Aquella* called for allowing the coat to harden for 6 to 12 hours; the surface was then to be kept moistened by a fine spray at frequent intervals for at least 48 hours. This would surely prove to be a troublesome and time-consuming procedure for the householder where any large areas are involved (and the "frequent intervals" would almost seem to imply that Mr. and Mrs. Householder would have to go on a two-shift basis in their cellar so that the coating of *Aquella* would not lack for moisture during the night).

After a lapse of sufficient time the hollow cores inside each block were filled with water. Then, after the blocks had become thoroughly soaked, these spaces were refilled with water and the leakage thru imperfections of the waterproofing coats observed by the fall in the level of the water.

The results of these tests accorded with Bureau of Standard findings in that the waterproofing qualities of *Aquella* were not significantly, if any, better than those of ordinary Portland cement. CR's tests also showed *Aquella* to be about on a par with *Kay-Tite*.

The upshot of this discussion is that the consumer who has a problem of water seepage through cellar walls would be just as well off using Portland cement, or cement with lime and very fine sand as by using the expensive and overadvertised *Aquella*, which when subjected to the cold analysis of the laboratory turns out not to possess any discernible magical wall-sealing properties. The user of the Portland cement treatment would certainly be much better off financially, and be much less likely to suffer the disappointment of his extravagant hopes or expectations of an easy way out of his damp-cellar problem.

Perhaps it should be said in conclusion that there just is no easy or sure cure for damp or wet cellar walls. The problem is a difficult and variable one, and the treatment required when one is practicable at all, at a reasonable cost, depends upon many factors. There is no answer by the magical product or "patent medicine" route, even if an article in a popular magazine, or newspaper advertising gives strong implications to the contrary.

# Automobile Jacks

**A**UTOMOBILE JACKS have long been a sore point with the motorist, who is fully justified in wondering why the manufacturers who do such an excellent job of producing the intricate mechanisms they do in manufacturing an automobile at low cost cannot put a few competent research men and engineers at work to provide an efficient, simple, and safe jack for general use with any widely sold make of car. Some time ago in corresponding with one of the large manufacturers of automobile jacks who had criticized an unfavorable comment by CR on a jacking system used by one of the larger motor car manufacturers, CR mentioned that there would be few consumers who would not be willing to pay for a good jack as an extra even if it cost three to five dollars, as an additional one-third of one percent in the cost of a car selling for \$1000 or more would seem a small item to most consumers. The manufacturer's reaction was that, based on his experience in selling to car manufacturers, *even a few cents* increase in price of an item furnished with their car was of considerable importance. He cited the case of a large manufacturer of piston rings who lost a very large order because his price per ring

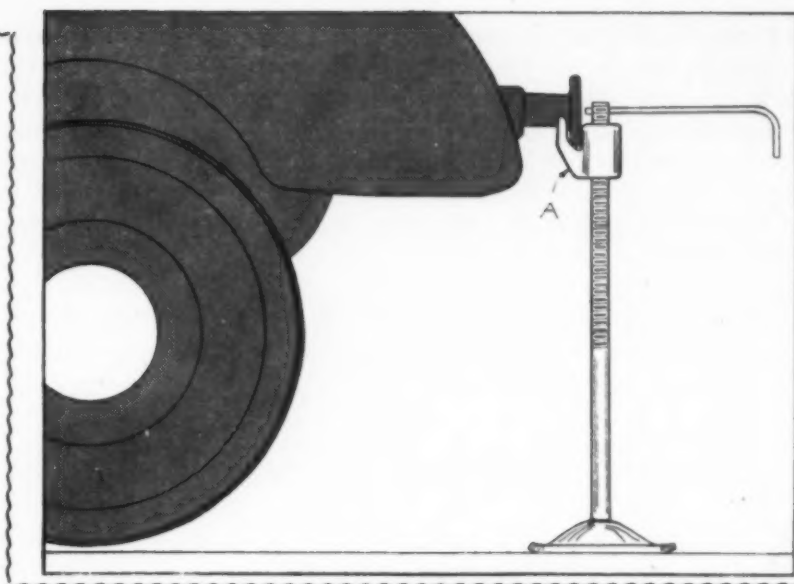
was more — by an amount less than 1 cent — than the price that was to be charged by another bidder; yet the extra cent would increase the cost of manufacture *only 25 cents per car*.

Considering the unsafe and awkward jacks that have been furnished in many cases, it might almost seem that the soundest procedure would be for the automobile manufacturers not to provide any jacks at all with their cars until they are willing to supply good ones. Then there would be some incentive for jack manufacturers to go to work on the problem and supply dealers and service stations with good quality jacks to be sold as extra equipment items. While admittedly this is an illogical approach from the consumers' standpoint, it may be a necessary one so long as motor-car manufacturers give such close concern to minute cost items as a single cent on a piston ring or a few cents in the manufacturing cost of a carburetor or other vitally important element of the car's equipment.

CR has constantly and closely watched the market in

an effort to discover a satisfactory jack—one that could be recommended to subscribers. The latest one to be tested was obtained from a Sears Roebuck retail store at \$3.19 (similar jacks are offered in later catalogs at \$1.27 reflecting, quite possibly, the poor customer-response to the higher price at which the jack was originally offered) and represents a type that has been widely sold by dealers during the period of shortage of automobile accessories (which still continues). It consisted of a steel bar about 28 in. long and 7/8 in. diameter, threaded for nearly three-quarters of its length. The bottom end of the bar was rounded to fit into a base plate which had a cupped center. To lift the car, the threaded bar is turned with a rod inserted in a hole at the top end of the screw and the casting "A" with its lip or hook fitting under the bumper is thereby raised.

Many consumers have bought this jack because, without the opportunity of actually trying it out first, they judged that its simple construction gave assurance of reliability



and practicability. However, a trial in use shows that this jack has disadvantages as numerous and as bad as do most of the other bumper jacks. Perhaps its most important defect is that its length is somewhat too short for many cars, and the last three inches of lift are very difficult to obtain, as the bumper interferes

with the operation of turning the long threaded rod with the handle. Raising the car with the jack is very slow and time-consuming, and it takes nearly as long to lower the car as to raise it, a serious disadvantage. The threading of the bar was with an ordinary V-thread, which is the wrong type for the purpose, as a square or buttress

thread should have been used to increase durability and reduce friction.

### C. Not Recommended

Bumper Jack (Distributed by Sears, Roebuck & Co.) \$3.19. Similar jack offered in current catalog at \$1.27. (See accompanying illustration for general design and operating principle of this screw jack.)

## Loud-Speaking Intercommunicating Telephone

A DEVICE described as a "two-way talkie" is now being advertised by department stores, hardware stores, and specialty shops. This is made by Dictograph Products, Inc., 580 Fifth Ave., New York 19, and sells at \$17.50 for two instruments plus twenty feet of wire (insufficient wire for most applications). Each instrument contains a crudely constructed microphone and "loud-speaker" and two ordinary flashlight batteries (D size cells,  $2\frac{3}{8}$  in. x  $1\frac{3}{8}$  in. diameter). These, with a switch are housed in a very light, thin sheet metal case  $8\frac{1}{2}$  in. long by about  $5\frac{1}{2}$  in. high. Each instrument weighs approximately three pounds. The bottom opening of the case is closed with a thin cardboard in the manner customary with the low-priced radio sets.

When the two instruments are set in different locations and connected by the two wires, one user may talk to the other by pushing down the switch on the front; when the switch is released, the unit is set for listening. The advertising which describes this as a "walkie-talkie" is of course, sheer "puffery," and an attempt merely to trade upon the great publicity which at-

tached to the military portable two-way *wireless* telephone which found wide use during World War II. The "two-way talkie" does not, of course, provide anything like the facilities and flexibility afforded by hand-held radio telephone equipment.

In a trial of a set of the "two-way talkie" at CR, it was possible in a quiet room to hear the voice at a distance of 30 to 40 feet away from the instrument. Although it was not always possible to distinguish what was being said at that distance, it was possible to determine that someone was calling. The reproduction of voice on the instrument was very variable, reflecting its poor design and workmanship; at times, the reproduction was fuzzy and raucous so that it was almost impossible to distinguish what was being said. Distortion of the voice was bad in any case, especially if the user did not follow carefully the instruction to speak with his mouth six to eight inches from the instrument. The device was also peculiarly subject to overloading and serious distortion when the user raised his voice in an effort to make it carry better to the person at the other end of the line.

Since the "talkie" has no bell or other signal, and hence the presence of the called person at or near the instrument to hear the call and operate the switch for talking is essential, it would be of limited usefulness compared with an ordinary interroom telephone (of which fairly satisfactory models were available for as little as \$2.65 to \$5 a pair in the pre-war period). Such very cheap interroom electric telephones would serve much the same purpose as the "two-way talkie" and probably work better for most users.

Transmission of the "two-way talkie" was found not to be greatly affected by a considerable length of wire; that is, transmission was almost normal with 200 ft. of wire between the instruments, and it was considered that communication could be carried on over a considerably greater distance, if necessary.

### C. Not Recommended

Two-Way Talkie (Dictograph Products, Inc., 580 Fifth Ave., New York 19) \$17.50 for two instruments and 20 ft. of connecting wire. Quality of voice reproduction, poor. Design and workmanship, poor. If the device were made a little better, perhaps at an increased production cost of about a dollar, it would probably warrant a B rating. 3



THE most important thing about a sugar substitute is not its sugar content, but the very small content (a fraction of one percent) of substances other than sugar. Specifically, iron, calcium, and phosphorus are the most important. (White sugar, unfortunately, is nothing but carbohydrate, and as such has the great disadvantage of being entirely lacking in the vitamin and mineral substances which are most important in all foods that constitute a significant proportion of the diet.)

In a large part of the United States, white sugar is the only type of sugar that is consumed in substantial amounts. This is unfortunate for the health of consumers, as Table I will show; other forms of sugar have mineral contents sufficient to make them of definite value nutritionally and thus very much more desirable for use in food than the white sugar now in almost universal use.

Women and children often suffer from anemia; thus the substitution of one or more of the sweetening materials mentioned may be one practical means of improving the diet in a way to help prevent or cure the anemia.

It is noted in a Mississippi State College Bulletin discussing this topic that sugar-cane juice concentrate or syrup that is high in iron content or, better still, sorghum syrup might be very much better in formulas for infants than sugar sources lower in iron (e.g., *Red Label Karo*, and cane syrup). *The less refined brands of molasses and syrups are particularly to be recommended*; however, a mixture of corn syrup and refiner's syrup, or sugar-cane syrup may be relatively very good sources of iron.

## *Important Nutritional ★ Value in Sweets ★ ★ Is Not the Sugar ★*

**Table I**

Showing the principal mineral contents of typical sugar substitutes.  
From Mississippi State College Agricultural Experiment Station  
Bulletin, No. 379.

Product	PERCENTAGE OF		
	Iron	Calcium	Phosphorus
Sorghum syrup	.0138	.152	.0275
Sugar-cane syrup	.0039	.070	.0238
Maple syrup (Towle's Log Cabin)	.0082	.021	.0059
Corn syrup (Karo Red Label)	.0014	.009	.0061
Corn syrup and Refiner's syrup	.0066	.055	.0068
Corn and sugar-cane syrup	.0032	.047	.0257
Molasses, Light New Orleans (Brer Rabbit Gold Label)	.0051	.186	.0458
Molasses, New Orleans (Brer Rabbit Green Label)	.0190	.314	.0687
Molasses, New Orleans (Aunt Dinah)	.0199	.477	.0533
Honey, Light	.0002	.005	.0035
Honey, Dark	.0005	.005	.0051
Honey, Light Yellow	.0006	.027	.0079
Soft sugar (brown)	.0027	.087	.0105

**Table II**

Showing, for convenience of comparison, iron, calcium, and phosphorus content of some other common foods. Data, except for turnip greens, from H. C. Sherman's *Chemistry of Food and Nutrition*, 6th Ed.

Food	PERCENTAGE OF		
	Iron	Calcium	Phosphorus
Beef, lean	.0030	.013	.204
Egg yolk	.0087	.157	.538
Milk	.0002	.118	.093
Whole wheat bread	.0030	.060	.370
Dried beans	.0103	.148	.463
Turnip greens	.0030	.322	.065

## Off the Editor's Chest

(Continued from page 2)

New York 20), and the Continental Oil Company (Continental Oil Bldg., Denver, Colorado). The *Touraide* maps put out by the latter are especially interesting in that they give brief descriptions and pictures of the points of interest in the various sections of the country. The Automobile Association of America (National Headquarters, Penn. Ave. at 17th St., Washington 6, D. C.) also gets out a series of Tour Books for various sections which are available from local AAA clubs at \$2 each. It should be noted that these maps are of pre-war origin and there may in some cases be important changes in routes since they were prepared. For Eastern travelers, Esso Road News (Room 1601, 21 West St., New York 6) will resume publication this summer of information about detours on specific routes and supply notes on points of interest. Esso Touring Service (30 Rockefeller Plaza, New York 20) is prepared to mark individual routings and supply maps to any point in the United States or Canada.

After the general line of direction of the trip has been laid out, decide whether to stop at hotels, tourist camps, or tourist homes. For a guide to hotels and some tourist homes, consult *Lodging for a Night* (\$1.50, from Duncan Hines, P. O. Box 548, Bowling Green, Kentucky). Free directories of motor courts are put out by United Motor Courts, Inc., (2728 Neptune Road, Houston, Texas) and Shell Touring Service (50 W. 50 St., New York 20). The AAA also puts out a Directory of Motor Courts and Cottages. Keeping in mind the fact that all signs point to the fact that nearly every family whose car still runs with reasonable reliability will take a vacation trip this summer, it will be well to schedule stops on long journeys as far in advance as possible and make reservations, whether you plan to stay overnight in a hotel or in a motor court. Those who do not like to take potluck with restaurants will find *Adventures in Good Eating* (\$1.50, also from Duncan Hines) helpful in locating

the more desirable places to eat, although those whose taste runs to hearty fare will find Mr. Hines' taste a bit on the chicken and waffles and super-desserts side.

Information about accommodations and facilities in the National Parks may be obtained from National Park Service, Department of the Interior, Washington, D.C. Have the family car thoroughly checked by a competent service station or garageman before starting out.

At best you must expect to spend a lot more for accommodations and food this year than in pre-war days; perhaps some can properly be charged off the family budget as necessary health insurance. The experts say that rest alone is not usually sufficient to overcome long-continued strain and fatigue. Often a complete change of scenery, new activity, and new environment are required. California, Arizona, New Mexico, Michigan, Wisconsin, New England, here we come!

## Abridged Cumulative Index of Previous 1946 Issues Consumers' Research Bulletins

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† indicates that listings of names or brands are included.	

# Ratings of Motion Pictures

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Box Office, Chicago Daily Tribune, The Christian Century, Cue, Daily News (N.Y.), The Exhibitor, Harrison's Reports, Mademoiselle, Motion Picture Herald, National Legion of Decency List, Newsweek, New York Herald Tribune, New York Times, Parents' Magazine, Release of the D.A.R. Preview Committee, Successful Farming, Time, Variety (weekly), and Unbiased Opinions of Current Motion Pictures, which includes reviews by the General Federation of Women's Clubs, the American Legion Auxiliary, National Film Music Council, and others.

The figures preceding the title of the picture indicate the number of critics who have been judged to rate the film A (recommended), B (intermediate), and C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure	hist—founded on historical incident
biog—biography	mel—melodrama
c—in color (Technicolor, Cine-color, or Magnacolor)	mus—musical
car—cartoon	mys—mystery
com—comedy	nov—dramatization of a novel
cri—crime and capture of criminals	rom—romance
doc—documentary	soc—social-problem drama
dr—drama	trav—travelogue
fan—fantasy	war—dealing with the lives of people in wartime
	wes—western

A	B	C		
—	9	2	Abilene Town.....	mus-wes AY
1	9	7	Adventure.....	mel A
—	1	2	Adventure for Two.....	dr AYC
—	1	10	Allotment Wives.....	war-mel A
1	4	—	Along the Navajo Trail.....	mus-wes AYC
—	1	3	Ambush Trail.....	wes AYC
—	1	5	Angel Comes to Brooklyn, An.....	mus-com A
—	1	7	Apology for Murder.....	cri-dr A
3	3	1	Appointment in Tokyo.....	war-doc AY
1	7	1	Bad Bascom.....	mel AYC
—	9	4	Bandit of Sherwood Forest.....	hist-dr-c YC
—	3	1	Bandits of the Badlands.....	wes A
—	1	3	Barge-Keeper's Daughter, The.....	com A
1	5	1	Battle for Music.....	mus-doc AYC
—	7	7	Because of Him.....	mus-dr A
—	2	3	Behind City Lights.....	dr A
—	4	5	Behind Green Lights.....	cri-mel A
7	9	2	Bells of St. Mary's, The.....	dr AYC
—	3	3	Black Market Babies.....	mel A
—	1	4	Blazing the Western Trail.....	mus-wes AYC
4	10	4	Blithe Spirit.....	com-c A
—	1	3	Blonde Alibi.....	cri-com A
1	6	1	Blue Dahlia, The.....	cri-mel A
—	1	6	Border Badmen.....	wes AYC
—	3	2	Both Barrels Blazing.....	mus-wes AYC
—	10	2	Breakfast in Hollywood.....	mus-com A
—	2	3	Bride Wore Boots, The.....	com A
4	2	—	Burma Victory.....	war-doc A
—	3	—	California Gold Rush.....	wes AYC
—	7	9	Captain Kidd.....	mel AYC
—	2	5	Captain Tugboat Annie.....	mel AYC
—	—	5	Castle of Crimes.....	mys-mel A
—	1	4	Catman of Paris, The.....	cri-mel A
—	1	8	Cinderella Jones.....	mus-com A
—	1	7	Close Call for Boston Blackie.....	cri-mys A

A	B	C		
—	2	6	Club Havana.....	mus-mel A
—	2	1	Code of the Lawless.....	wes AYC
1	9	3	Col. Effingham's Raid.....	dr A
—	2	4	Come Out Fighting.....	com AYC
1	5	7	Confidential Agent.....	war-mel A
—	13	2	Cornered.....	war-mel A
—	—	3	Crazy Knights.....	cri-mel AYC
—	6	3	Crime Doctor's Warning, The.....	mys-dr A
—	4	5	Crimson Canary, The.....	mus-dr A
—	5	6	Dakota.....	mel A
—	6	5	Daltons Ride Again, The.....	wes AYC
—	4	8	Danger Signal.....	mel A
—	5	3	Danny Boy.....	dr AYC
—	2	3	Dark Is the Night.....	war-dr A
—	7	4	Deadline at Dawn.....	cri-mel A
—	4	3	Detour.....	cri-mel A
—	5	9	Diary of a Chambermaid.....	dr A
—	8	2	Dick Tracy.....	mel A
—	1	2	Ding Dong Williams.....	mus-com AYC
—	6	6	Doll Face.....	mus-com A
10	6	6	Dolly Sisters.....	mus-com-c A
—	7	—	Don't Fence Me In.....	mus-wes A
1	5	3	Dragonwyck.....	nov A
—	1	2	Drifting Along.....	mus-wes AYC
—	4	6	Easy to Look At.....	mus-com AYC
—	8	5	Enchanted Forest, The.....	fan-c AYC
—	1	6	Face of Marble.....	cri-mel A
1	2	6	Fall of Berlin.....	war-doc A
1	6	7	Fallen Angel.....	mys-mel A
—	—	5	Fatal Witness, The.....	cri-mel A
—	2	2	Fear.....	cri-mel A
—	3	1	Fedora.....	dr A
—	1	2	Fighting Bill Carson.....	wes AYC
—	7	8	First Yank into Tokyo.....	war-dr A
—	—	3	Flaming Bullets.....	mus-wes AYC
—	1	6	Flying Serpent, The.....	mel A
—	3	3	Four Hearts.....	mus-rom A
1	4	1	From This Day Forward.....	war-dr A
—	1	2	Frontier Feud.....	wes AYC
—	8	4	Frontier Gal.....	mus-wes-c A
—	3	2	Frontier Gunlaw.....	wes AYC
—	5	7	Game of Death, A.....	cri-mel A
—	1	6	Gentleman Misbehaves, The.....	mus-com A
—	—	4	Gentlemen with Guns.....	wes AYC
—	6	6	Getting Gertie's Garter.....	com A
—	5	4	Gilda.....	mus-cri-mel A
—	4	4	Girl No. 217.....	war-dr A
—	3	6	Girl of the Limberlost.....	mel AYC
—	1	7	Girl on the Spot.....	mus-dr AY
—	1	5	Girls of the Big House.....	cri-mel A
2	3	—	Green Years, The.....	nov AY
—	1	7	Guy Could Change, A.....	dr A
1	13	3	Harvey Girls, The.....	wes-mus-com-c A
—	1	4	Hit the Hay.....	com AYC
—	3	11	Hold That Blonde.....	com A
—	5	3	Hoodlum Saint, The.....	mus-dr A
—	2	3	Hot Cargo.....	war-mel AYC
—	2	3	Hotel Reserve.....	war-mel A
—	2	9	House of Dracula.....	cri-mel A
—	1	4	House of Horrors.....	cri-mel A
5	11	—	House on 92nd St., The.....	war-mel AYC
—	2	3	How Do You Do?.....	mus-cri-com A
—	—	7	I Ring Doorbells.....	cri-mel A
—	3	4	Idea Girl.....	mus-com A
1	6	7	Isle of the Dead.....	mys-mel A
—	6	3	It Happened at the Inn.....	mel A
—	1	3	Johnny Comes Flying Home.....	war-dr AYC
1	5	2	Johnny in the Clouds.....	war-dr A
3	3	2	Journey Together.....	war-doc AY
—	5	3	Junior Prom.....	mus-com YC
—	2	1	Just Before the Dawn.....	cri-mys A



A	B	C	
1	2	—	Kid from Brooklyn, The.....mus-com-c AY
1	14	3	Kiss and Tell.....com A
2	7	3	Kitty.....dr A
4	13	1	Last Chance, The.....war-dr A
—	4	2	Lawless Empire.....wes AYC
3	5	7	Leave Her to Heaven.....dr-c A
—	6	1	Letter for Evie, A.....war-com A
—	4	5	Life with Blondie.....war-com AYC
—	3	2	Lightning Raiders.....wes AYC
—	3	1	Little Giant.....com A
—	3	2	Live Wires.....com A
—	2	1	Lone Texas Ranger, The.....mus-wes AYC
—	1	4	Lost Trail, The.....wes AYC
—	1	9	Love, Honor and Goodbye.....com A
—	2	4	Love on the Dole.....dr A
—	6	3	Madonna of the Seven Moons.....dr A
—	6	1	Madonna's Secret, The.....cri-mys A
—	3	10	Man Alive.....com A
—	7	6	Man in Grey, The.....dr A
1	7	1	Marie-Louise.....war-dr AYC
—	1	2	Marshal of Laredo.....wes A
—	2	5	Mask of Dijon, The.....mys-mel A
—	8	10	Masquerade in Mexico.....mus-com A
—	6	3	Meet Me on Broadway.....mus-com A
—	4	9	Men in Her Diary.....com A
—	4	7	Mexicana.....mus-com A
2	9	6	Mildred Pierce.....dr A
1	7	4	Miss Susie Slagle's.....dr AYC
—	5	—	Murder in the Music Hall.....mus-mys-mel A
—	2	3	Murder is My Business.....cri-mel A
—	11	3	My Name is Julia Ross.....cri-mys A
2	5	5	My Reputation.....dr A
—	—	3	Navajo Kid.....wes AYC
—	3	—	Navajo Trail, The.....wes AYC
—	2	4	Notorious Lone Wolf, The.....cri-mel A
—	4	1	Once There Was a Girl.....dr A
—	4	4	One Way to Love.....com A
—	8	2	Open City.....war-dr A
—	5	—	Our Hearts Were Growing Up.....com AY
—	4	4	Out of the Depths.....war-mel AY
—	—	4	Outlaw, The.....wes A
—	—	7	Outlaws of the Rockies.....mus-wes AYC
1	7	5	Pardon My Past.....com A
—	4	—	Partners in Time.....com AYC
—	4	7	People Are Funny.....mus-com AYC
—	3	7	Pillow of Death.....cri-mel A
1	5	3	Portrait of Maria.....dr A
—	2	3	Postman Always Rings Twice, The.....cri-dr A
—	1	2	Prairie Rustlers.....wes AYC
—	2	7	Prison Ship.....war-mel A
—	6	5	Pursuit to Algiers.....mus-mel AYC
—	3	9	Radio Stars on Parade.....mus-com AYC
—	—	6	Red Dragon, The.....mys-mel AYC
—	—	4	Riders of the Dawn.....mus-wes AYC
—	2	10	River Gang.....mel A
—	1	6	Riverboat Rhythm.....mus-com A
2	13	2	Road to Utopia.....mus-com A
—	3	2	Roaring Rangers.....wes AYC
—	2	2	Romance of the West.....mus-wes-c AYC
1	3	1	Rough Riders of Cheyenne.....wes AYC
—	1	4	Rustlers of the Badlands.....mus-wes AYC
—	8	8	Sailor Takes a Wife, The.....com A
—	11	2	San Antonio.....mus-wes-c AYC
4	7	4	Saratoga Trunk.....mel A
—	6	9	Scarlet Street.....mel A
—	6	3	Scotland Yard Investigator.....mys A
—	2	9	Senorita from the West.....mus-rom AYC
—	—	5	Sensation Hunters.....mel A
—	7	6	Sentimental Journey.....dr A
5	10	—	Seventh Veil, The.....dr A
—	4	3	Shadow of Terror.....cri-mel A
—	2	3	Shadow Returns, The.....cri-mel A
—	10	2	Shady Lady.....mus-dr A
—	5	5	She Went to the Races.....com A
—	9	4	She Wouldn't Say Yes.....com A
—	4	5	Shock.....cri-dr A

A	B	C	
—	3	5	Sing Your Way Home.....mus-com A
—	5	1	Six P.M.....war-mus-dr A
—	1	4	Six-Gun Man.....wes AYC
—	2	4	Smooth as Silk.....cri-mel A
—	11	5	Snafu.....com A
—	3	1	Song of Arizona.....mus-wes AYC
—	—	3	Song of Mexico.....mus-dr A
—	—	3	Song of Old Wyoming.....mus-wes-c AYC
—	2	1	Song of the Prairie.....mus-wes AYC
—	—	4	South of the Rio Grande.....mus-wes AYC
—	11	5	Spanish Main, The.....adv-c A
9	6	2	Spellbound.....dr A
—	3	5	Spider, The.....mys-mel A
—	—	6	Spider Woman Strikes Back, The.....cri-mel A
4	8	—	Spiral Staircase, The.....cri-mel A
—	—	4	Stagecoach Outlaws.....wes AYC
4	12	1	State Fair.....mus-com-c AYC
1	13	1	Stork Club, The.....mus-com A
—	—	—	Strange Affair of Uncle Harry (See Uncle Harry)
—	2	8	Strange Confession.....cri-mys A
—	1	3	Strange Holiday.....war-dr A
—	3	2	Strange Impersonation.....dr A
—	4	1	Strange Love of Martha Ivers, The.....cri-mel A
—	2	3	Strange Mr. Gregory, The.....cri-mel A
—	—	5	Strangler of the Swamp.....cri-mel A
—	6	1	Sunbonnet Sue.....mus-dr AYC
—	5	1	Sunset in El Dorado.....mus-wes AYC
—	5	4	Swing Parade of 1946.....mus-com A
—	—	4	Symphonie d'Amour.....mus A
—	2	6	Tahiti Nights.....mus-com A
—	3	5	Tangier.....war-mus-mel A
—	11	3	Tars and Spars.....mus-com A
—	6	5	Tarzan and the Leopard Woman.....adv A
—	2	8	Ten Cents a Dance.....mus-com A
—	5	4	Terror by Night.....cri-mel AY
—	3	2	Texas Panhandle.....wes AYC
—	—	6	That Night With You.....mus-com A
—	3	5	They Made Me a Killer.....cri-mel A
6	9	1	They Were Expendable.....war-mel AYC
1	7	6	This Love of Ours.....mel A
—	8	4	Three Strangers.....mel A
—	2	4	Three's a Crowd.....cri-mel A
—	1	2	Throw a Saddle on a Star.....mus-wes A
—	—	5	Tiger Woman, The.....mys-mel A
2	3	—	To Each His Own.....war-dr A
—	4	4	Tokyo Rose.....war-mel A
2	7	3	Tomorrow is Forever.....dr A
—	8	5	Too Young to Know.....dr A
—	2	1	Trail of Kit Carson.....wes AYC
—	2	1	Trail to Vengeance.....mus-wes AYC
—	—	3	Trouble Chasers.....com A
7	5	—	True Glory, The.....war-doc A
2	3	—	Two Sisters from Boston.....mus-com A
—	11	6	Uncle Harry.....cri-mel A
—	7	3	Up Goes Maisie.....com AYC
1	10	1	Vacation from Marriage.....war-com A
1	6	—	Virginian, The.....wes-c AYC
—	3	5	Voice of the Whistler, The.....mys-mel A
—	4	—	Wagon Wheels Westward.....wes AYC
3	7	3	Walk in the Sun, A.....war-dr AYC
—	3	3	Waltz Time.....mus-com A
—	5	4	Wanderer of the Wasteland.....wes AYC
1	5	2	Well-Groomed Bride, The.....war-com A
1	12	3	What Next, Corporal Hargrove.....war-com AYC
—	—	4	Whirlwind of Paris.....mus-com A
—	3	11	Whistle Stop.....mel A
—	1	7	White Pongo.....mel AYC
—	3	1	Wife of Monte Cristo.....adv AYC
—	3	5	Woman Who Came Back, The.....mel A
—	5	1	Yank in London, A.....dr AY
—	7	9	Yolanda and the Thief.....mus-com-c A
—	2	3	You Can't Do Without Love.....mus-mys AYC
—	5	4	Young Widow.....war-dr A
—	—	3	Youth Aflame.....dr A
2	9	2	Ziegfeld Follies.....mus-com-c A

# The Consumers' Observation Post

(Continued from page 4)

was finally disposed of by the discovery that bran was too rough for the human digestive tract and that an organic phosphorus compound, known as phytin, in whole wheat bread combined with the calcium and iron of the food eaten with the bread to form insoluble, and hence unavailable, calcium and iron phytates during the digestive process. All in all, the people who just didn't take to whole wheat bread and refused to eat it regardless of its much touted virtues were the ones who were right, not those who assured one and all of the exceptional merits of the whole grain products.

\* \* \*

DERMATITIS OF THE FEET is not always what the layman calls "athlete's foot." Studies by two physicians and their colleagues reported in the Journal of the American Medical Association, February 2, 1946, indicated that out of 400 dermatologic patients 40 percent showed sensitization or irritation from the assortment of tinctures, lotions, salves, and powders used for treatment of "athlete's foot." Some 35 percent reacted unfavorably to one of the organic mercurials commonly used in such preparations. Other substances in medicaments causing difficulty were merthiolate, phenol (carbolic acid), and benzocaine. The researchers found that the average number of preparations that had been used by a patient was four, but in cases where the dermatitis was recurrent or of long duration, the number might run from ten to twenty, or even more. The conclusion to be drawn seems to be to let your feet alone, or consult a dermatologist.

## **"An affirmation of what a lot of hearty eaters and common-sense men and women have believed and practiced through the centuries . . . .**

"Meat three times a day? Well, why not? Here, with a rich marshaling of material is the gist of the case for the world's meat eaters. . . . Here's to Schlink and Phillips, the bringers of light, and to a thick, juicy steak under every broiler."

—Stanley Walker  
N. Y. Herald Tribune

"There is a book publisher in New York named Richard R. Smith who has sent me, an involuntary vegetarian, a tome with a magnificent full-color picture of a beefsteak on the front entitled 'Meat Three Times a Day'."

Mr. Smith, are you crazy? Why didn't you send me a piece of meat?

This is a fine time to be torturing people with books about what elegant stuff meat is, how it keeps you from catching colds, and makes your wife work harder. In my house, the only meat is phony, made of soybeans."

—Frederick C. Othman  
N. Y. World Telegram

"A lot of thought, for example, went into the writing of *Meat Three Times a Day*, and a lot of additional controversy has come out of it. Vegetarians bristled at its title and criticized its claims, chief among which was that the United States wants and needs more chops and steaks, more liver and game and lean pork."

—The Philadelphia Inquirer

### **Meat Three Times A Day**

by  
F. J. Schlink and M. C. Phillips

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"The old menus they have resurrected are something to make a mouth water and to sigh for a return of the days when one might follow a venison steak with a dozen stewed oysters, in the best hotel in town, for a total cost of 75 cents." — N. Y. Sun

**NEW PRODUCTS: C.C.C. All Purpose Cleanser** (Colonial Chemical Co., New York City), sold to industrial users and designed for cleaning marble, wood floors, furniture, painted woodwork and walls, etc., is a product that is typical of various cleaning and washing compounds (detergents) purchased by institutions and other large users. Its composition is very similar, however, to that of many detergent powders and liquids widely sold in department stores, house furnishing shops and hardware stores for household use. C.C.C. was found on analysis to consist of about 13% potassium soap, 1-1/2% saponifiable oil, 0.25% sodium carbonate (washing soda), a little less than 1% of trisodium phosphate (tsp.) and something over 1/2% of sodium metasilicate. The remainder, amounting to about 85%, is water. The product is to be used in dilution of 2 ounces per gallon of warm water. C.C.C. is thus a "built soap" sold as a solution (six-sevenths of which is water) which is later diluted again for use. Soap solutions are for most purposes uneconomical on account of the great cost of packaging and transporting the large water content. For some uses, however, such a prepared product, if reasonably priced in terms of its actual soap content, may be useful in saving labor, time, and trouble on the part of the large scale users. This is, however, a question to be decided according to each user's circumstances and considerations respecting availability of time and labor.

**Flaxoap**, a Sherwin-Williams product, is typical of various soft or linseed oil soaps which are much used for household cleaning purposes, and also for cleaning of automobile bodies. This product was found to be a potash linseed oil soap, about 35%; linseed oil (not combined with alkali as a soap), 7.3%; and water, about 57%.

**Pan-Glo** (Seeman Brothers, Inc., New York City; 10¢ for 5-oz jar) sold as a cleaner for "aluminum, enamel, porcelain, iron, steel and all cooking utensils" was found on analysis to consist of 8% soda soap; 2% soda ash (washing soda); 84.2% abrasive (crystalline silica); water, about 6%. The coarseness and hardness of the abrasive in this product make it undesirable for use on aluminumware, enamelware, or polished stainless ware. Further, an alkali, such as soda ash, is an undesirable ingredient in a cleaner to be used on aluminumware.

**SR Household Utility Pad** (The Seamless Rubber Co., New Haven, Conn.) 15c from 5-and-10-cent stores, is a thin rubber mat 12-1/2 inches by 8-1/4 inches having uniformly spaced holes about 5/8 inch in diameter. On the upper side an extra thickness of rubber is molded around the holes. As the holes are serially numbered, the mat is evidently made from war surplus material; since the quality of the rubber compound is good, the mats are very satisfactory for use on sink drainboards, to minimize breakage, and on stove tops (2 or 3 will be needed for an average stove top, 2 perhaps for a drainboard).

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# PHONOGRAPH RECORDS



By Walter F. Grueninger

Please Note: Prices quoted do not include taxes. In the ratings AA indicates highly recommended; A, recommended; B, intermediate; C, not recommended.

Columbia and Victor have recently announced increases in the list prices of most album sets.

## ORCHESTRA

**Berlioz: *Symphonie Fantastique*.** San Francisco Symphony Orchestra under Monteux. 12 sides, Victor Set 994. \$6.85. Controversial work which I admire. Monteux's interpretation—extraordinary. Recorded in an empty hall. Best buy of this composition.

Interpretation AA  
Fidelity of Recording A

**Grofe: *Grand Canyon Suite*.** NBC Symphony Orchestra under Toscanini. 8 sides, Victor Set 1038. \$4.85. An impression that has become popular, especially the movement, "On the Trail." Played superbly but the maestro calls for dynamic contrasts in "Sunrise" and "Cloudburst" which the engineers have failed to give us clearly.

Interpretation AA  
Fidelity of Recording B

**Prokofiev: *Scythian Suite*.** Chicago Symphony Orchestra under Defauw. 6 sides, Victor Set 1040. \$3.85. The Scythians, nomads inhabiting South Russia, conquered an Iranian speaking people about 800 BC but were finally driven back and passed out of history in 100 BC. This wild, barbaric music started out as a ballet, ended as a suite. Brilliant performance and recording.

Interpretation AA  
Fidelity of Recording AA

**Rachmaninoff: *The Isle of the Dead*.** Minneapolis Symphony Orchestra under Mitropoulos. 6 sides, Columbia Set 599. \$3.85. Closely following Victor's release of this somber symphonic poem comes Columbia's. Both performances are excellent, though I lean toward Victor's. Columbia's recording frequently suggests that one instrument after another steps to the microphone whereas Victor's creates the impression of a Symphony Hall concert. Columbia surfaces are more quiet. Overall, Boston Symphony on Victor Set 1024 wins by a narrow margin.

Interpretation AA  
Fidelity of Recording A

**Schubert: *Unfinished Symphony*.** Boston Symphony Orchestra under Koussevitzky. 6 sides, Victor Set 1039. \$3.85. Lovely, standard, frequently performed work. As Koussevitzky's fussing sometimes gets in the way of this simple music I cling to the less expensive Bruno Walter's Victor Set G 9 (\$2.85), but many regard Beecham's Columbia Set 330 (\$3.85) as best.

Interpretation A  
Fidelity of Recording A

**Stravinsky: *Le Chant du Rossignol* (5 sides) & *Chabrier: Joyous March* (1 side).** Cincinnati Symphony Orchestra under Goossens. Victor Set 1041. \$3.85. Symphonic poem taken from a ballet taken from an opera! Likely to appeal most to Stravinsky fans. Obvious hall echo in the few loud passages.

Interpretation A  
Fidelity of Recording A

## CONCERTO

**Beethoven: *Concerto No. 1*.** Ania Dorfmann (piano) and the NBC Symphony Orchestra under Toscanini. 8 sides, Victor Set 1036. \$4.85. Sparkling work played so fast the solo part lacks distinction. "Live" recording. Likely to please more buyers than older competitive sets.

Interpretation A  
Fidelity of Recording AA

**Rachmaninoff: *Concerto No. 2*.** Gyorgy Sandor (piano) and the Philharmonic-Symphony Orchestra of New York under Rodzinski. 8 sides, Columbia Set 605. \$4.85. Mediocre performance and recording of a melodious work. Victor Sets 58 and 666 are preferable, the first for Rachmaninoff's definitive performance, the second for Moisevitch's commendable performance and for transparent English recording.

Interpretation B  
Fidelity of Recording C

## VOCAL

**Kreisler: *The Old Refrain & Pestalozza: Ciribiribin*.** Grace Moore (soprano). 2 sides, Victor 10-1152. 75c. Melodious

songs sung superbly, excepting for the closing with high notes in *The Old Refrain*. Recording of *Ciribiribin*, excellent. Over-side, however, my copy is so badly "blurred" as to be unenjoyable.

Interpretation AA  
Fidelity of Recording C

**Strauss: *In Old Vienna*.** Miliza Korjus (soprano). 4 sides, Victor Set SP 15. \$2.25. Unique set. I prefer the orchestral waltzes without vocal embellishments but admirers of *coloratura* may wish to buy this set for Miss Korjus' matchless performance. Included are abbreviated versions sung in English which I cannot understand of "Wine, Women, and Song," "Blue Danube," "Emperor," "One Thousand and One Nights."

Interpretation AA  
Fidelity of Recording A

**Tosti: *Serenata & L' Ultima Canzone*.** Ezio Pinza (base). 2 sides, Columbia 71687. \$1. Favorite Italian songs. In *L' Ultima Canzone* Pinza's late entry in one measure and his shaky last note are unfortunate but the remainder of the disc is superb.

Interpretation B  
Fidelity of Recording A

**Verdi: *Rigoletto—Questa o Quella* & *Puccini: Turandot—Nessun Dorma*.** Jussi Bjorling (tenor). 2 sides, Victor 10-1200. 75c. Smooth performances of arias sung by a gifted Scandinavian.

Interpretation AA  
Fidelity of Recording A

**Familiar Hymns.** St. Luke's Choristers under William Ripley Dorr. 8 sides, Capital Set DB 15. \$2.50 (Sunset and Vine, Hollywood, Calif.). Reverent performance by the young men of St. Luke's, Long Beach, Calif. The recording is excellent with those hymns accompanied by orchestra slightly more clear than those accompanied by organ. Several surfaces are noisy. Included are "He Leadeth Me," "Now the Day is Over," "Onward Christian Soldiers," "Lead Kindly Light," etc.

Interpretation AA  
Fidelity of Recording A

**Lily Pons *Waltz Album*.** Pons (soprano). 8 sides, Columbia Set 606. \$4.85. Strange mixture. Most of these numbers are sung better by artists of lesser reputation. Included are "Kiss Me Again," "Tell Me You Love Me Tonight," "I'll See You Again," "I'll Follow My Secret Heart," and the three most interesting works and best performances: "Flodermaus Fantasy," "Juliet's Waltz Song," "Valse Ariette."

Interpretation A  
Fidelity of Recording A

## LIGHT

**Trenet: *Six Chansons Francaises*.** Enny de Vries (chanteuse). 6 sides, International Set 3. \$3.50. Lively songs of the boulevard sung by an expert.

Interpretation AA  
Fidelity of Recording A

**Richard Dyer-Bennet (tenor).** 6 sides, Asch Set 461. \$3.50. Polished singing of famous ballads with uncommonly good guitar accompaniment by the singer. The recording, however, cut at an unnecessarily high level, distorts the voice as I have heard it on many occasions and fails to project the commendable shading this performer always employs. Included are "Barbara Allen," "I Once Loved a Girl," "The Three Ravens," "John Henry," "Gently Johnny My Jingo."

Interpretation AA  
Fidelity of Recording B

**Alfred E. Smith Memorial Album.** Danny O'Neil, Kay Armen, Five De Marco Sisters, Ray Bloch, His Orchestra and Chorus. 8 sides, Majestic Set M1. \$3.50. Favorite songs of Al Smith pressed on plastic. Fair performance and recording. Included are "My Gal Sal," "Give My Regards to Broadway," "The Bowery," "Sidewalks of New York," Gounod's "Ave Maria," "Easter Parade," etc.

Interpretation B  
Fidelity of Recording B